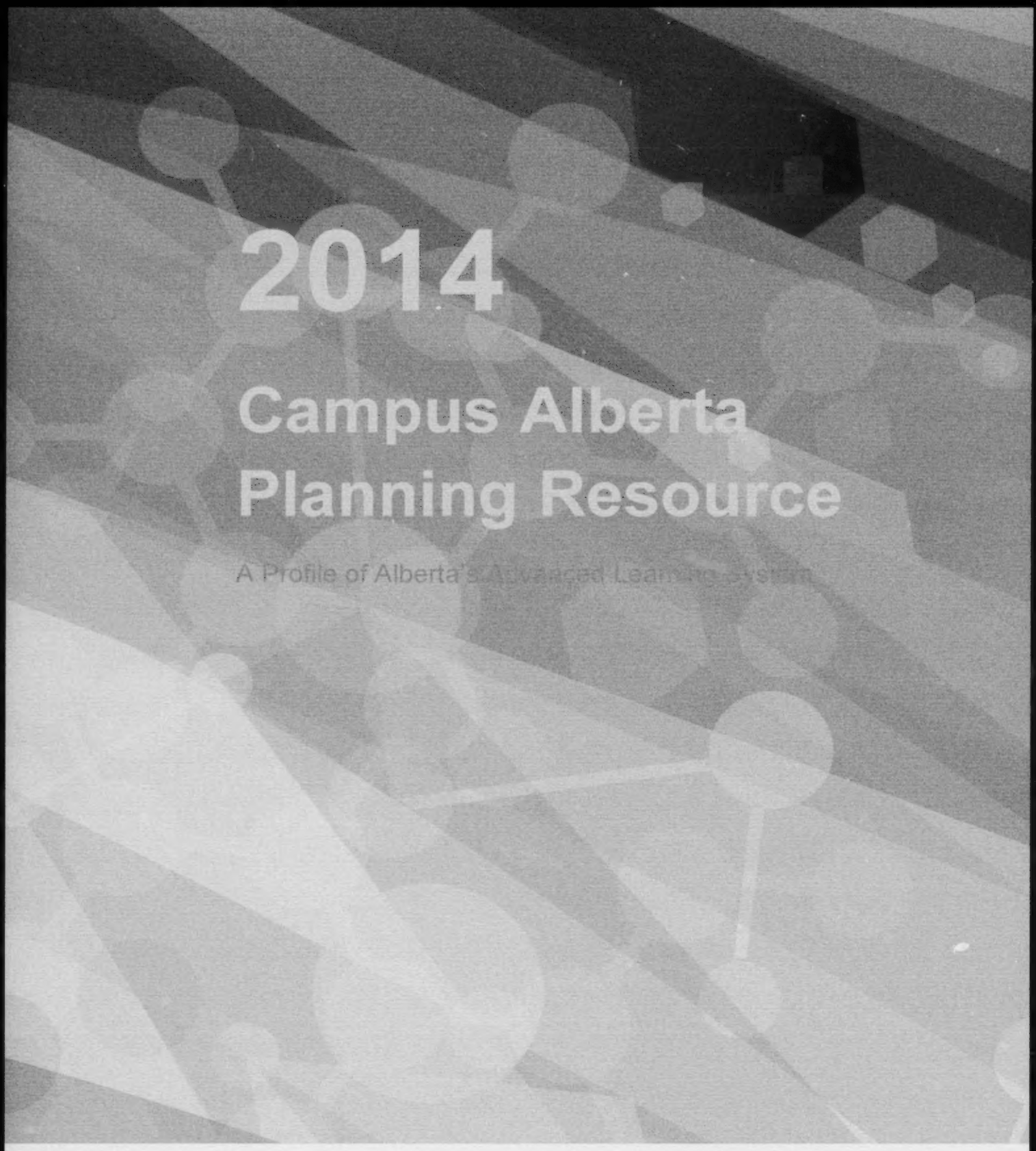

2014

Campus Alberta Planning Resource

A Profile of Alberta's Advanced Learning System

Alberta Innovation and Advanced Education

This report is available at http://iae.alberta.ca/capr

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EXECUTIVE SUMMARY

Alberta's post-secondary education system is an important influence on Alberta's society and economy. At the same time, the post-secondary system is influenced by the demographic context of the province, as well as other social factors, and by economic drivers from inside and outside Alberta.

The province's post-secondary education system helps students to develop many of the skills they need to be successful in the workplace and in life. In this way, it supports the creation of a skilled workforce. In addition, the post-secondary system feeds into, and is part of, the infrastructure of a larger research and innovation system in the province that benefits Albertans through the development of innovative solutions for economic, environmental and social issues.

Alberta Innovation and Advanced Education's outcomes framework identifies three priority system level outcomes for Alberta's public post-secondary system—A Learner Enabling System, Value for Investment and Advancing Knowledge. The 2014 Campus Alberta Planning Resource is organised based on these outcomes, and provides detailed information on many of the drivers of change that will both impact the post-secondary education system and that will be influenced by it. The Socio-economic Environment section gives an overview of large scale demographic and economic trends impacting the province, and the ways in which they touch on, and interact with, the post-secondary system. The Learner Enabling System section provides an overall profile of student behaviour and pathways in the post-secondary education system. The Value for Investment section delivers information on outcomes after graduation and on some of the outputs of the post-secondary system. Finally, the Advancing Knowledge section provides information on Campus Alberta's research capacity, strength and intensity.

Socio-economic Environment

Overall, Alberta's annual population growth is the highest of all the provinces, and this is primarily due to immigration. The overall population is expected to grow to 5 million by 2023, a growth rate of 21.8%. In 2013, more than three quarters of the population growth in the province was due to interprovincial or international migration. Most migrants to the province move to urban centres.

Labour shortages are predicted for the province, because of demographic and economic factors. The combination of a shrinking proportion of working age people in the total population with economic growth and low unemployment will likely cause shortages. **Shortages are predicted for the business; health sciences; physical, natural and applied sciences; and trades and technologies areas in particular, although enrolment is also projected to grow in these areas.**

There has been strong economic growth in the province recently, but this could change due to global trends, changes in commodity prices or a rise in interest rates. Economic growth tends to result in lower participation in post-secondary education in general (although this trend varies by program type) because some individuals would prefer to enter the labour force instead of seeking advanced learning opportunities. In addition, Alberta has higher employment rates for 18 to 34 year olds than the rest of Canada. The median age of the provincial population is increasing, and the rate of increase for the working-age population and the population that would normally attend post-secondary education is lower than for older cohorts. **Together, these factors have resulted in a relatively low post-secondary participation rate for the 18 to 34 year old population in Alberta.**

A Learner Enabling System

Participation in post-secondary education in the province is lower than the Canadian average (and this trend has been stable over time), but the post-secondary attainment rates in Alberta are similar to Canada overall. This is likely due to the fact that most immigrants to the province have already completed their post-secondary education, and because immigration to the province has been increasing. The post-secondary educational attainment rate of the labour force has increased since 2004. In terms of skill levels, Albertans' literacy, numeracy and problem solving skills are comparable or above the Canadian averages according to recent data from an Organization for Economic Cooperation and Development study.

Although the majority (83%) of high school students indicated that they plan to pursue education or training after high school, in actuality, 40% of Alberta high school students transition to post-secondary within 4 years of entering Grade 10, and 59.2% do so within 6 years. While post-secondary enrollment has gradually increased over time, this may reflect population increases (i.e. as shown by the participation rate, the proportion of 18-34 year olds enrolling in post-secondary education has not increased). Post-secondary enrollment in Alberta is primarily driven by natural population increases, as the majority of the students enrolled in post-secondary education in Alberta apply from Alberta and are Canadian citizens or permanent residents. However, **the number of international students enrolling on student visas and their proportion of total enrolment has steadily increased since 2004-05. Enrolment is projected to continue increasing over the next ten years, with capacity shortages arising primarily in the Calgary region.**

There has been increased enrollment in all sectors since 2008-09 except for the Specialized Arts and Culture Institutions sector. The number of new apprentices has been increasing since the economic recovery in 2011. An increasing number of students are enrolling in degree programs but the share of enrollment by sector is stable.

The Aboriginal population is younger and is growing faster than the non-Aboriginal population. **The Aboriginal population has lower post-secondary attainment rates than the non-Aboriginal population, especially for degrees.** There is also a smaller proportion of high school graduates in the Aboriginal population. However, the numbers of Aboriginal learners enrolling in post-secondary education has increased, and the proportion of the student population which is Aboriginal has also increased, indicating that this change is not solely due to population increases. There was a larger proportion of Aboriginal students who enrolled in preparatory and basic upgrading and in non-credential programs as compared to the non-Aboriginal population, which could indicate a greater use of upgrading to transition to other credential programs and **different learner pathways** in general for this group.

Value for Investment

Successful completion of a post-secondary credential has many labour market benefits for individuals, including increased earnings, lower unemployment rates and fewer layoffs. **Individuals who are members of populations who tend to have higher unemployment rates than the general population, such as international immigrants, youth aged 15 to 24, and Aboriginal people, also tend to have lower unemployment rates after completing post-secondary credentials, as compared to their peers.**

In Canada, individuals who have completed bachelor's degrees and college certificates have increased earnings over time. The financial value of a credential is lower in Alberta than in Canada overall, but still substantial. Compared to individuals with a high school diploma, the cumulative additional earnings from 1991 to 2010 (in 2010 dollars, after controlling for inflation) for bachelor's degree holders in Alberta were: $507,000 for men and $515,000 for women.

Most graduates worked while taking classes, and many relied on financial aid from government and/or non-government sources to finance their investment in their post-secondary education. Thirty-nine percent of graduates reported receiving a government sponsored student loan and 29% of graduates reported receiving some form of non-government financing for education-related expenses. Eighty-six percent of 2009-10 graduates felt that their post-secondary education program was worth the financial investment.

Advancing Knowledge

Research performed at Campus Alberta institutions generates knowledge to answer complex questions, find solutions, challenge assumptions, validate prior findings, and contribute to a greater knowledge-base of scientific understanding. These roles are critical to advancing social, environmental, and economic resilience at a local, national, and international level, while also directly contributing to the development and retention of students. In Alberta, post-secondary institutions are the largest group of publicly funded research performers in the province.

Alberta researchers engage in scholarly collaboration that allows researchers to participate in leading-edge developments. The student learning experience and quality is enhanced by faculty working at the leading edge of their fields of study and the opportunity to train on state-of-the-art infrastructure using advanced research techniques. The province attracts talented international students to work in research areas—international students are far more likely to enroll in doctoral or master's programs compared to Canadian citizens and permanent residents, and they are also more likely to enroll in Physical, Natural and Applied Sciences than Canadian citizens and permanent residents.

Alberta researchers contribute to more than 11,000 scientific papers annually. This is almost twice as many papers as their contribution 10 years earlier.

What's New in CAPR this year:

- New Programme for the International Assessment of Adult Competencies (PIAAC) data on literacy, numeracy and problem solving in technologically rich environment skills
- New information on labour market outcomes for graduates
- New Cross-Jurisdictional Trends in Advanced Learning section
- New information on the scholarly activity and basic research output of the province

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SOCIO-ECONOMIC ENVIRONMENT

Demographics

Demographic trends in the province affect Alberta's advanced learning system in many important ways. Population growth, at the provincial and regional levels, influences demand for post-secondary education and affects access at various points in the system. The relative contributions of various sources of population growth—natural increase (births minus deaths) vs. in-migration—also have an effect on demand for post-secondary education. Additionally, understanding the demographic sub-groups in the population is important in ensuring that the unique needs of these sub-groups are met by the advanced learning system.

Population Growth

Alberta's growth rate was the highest among all provinces in 2013. During the period of January 1, 2013 to January 1, 2014, Alberta had an unprecedented annual gain of 134,329 people, resulting in an annual population growth rate of 3.40%.[1]

Alberta's strong economy and healthy job market are expected to continue to attract people from other provinces and abroad. By 2023, Alberta's overall population is projected to reach close to 5 million—an increase of 875,551 (21.8%) from 2013. Close to 80% of this increase is expected to be in the geographic service regions of Edmonton and Calgary. Population growth is anticipated for all other service regions as well, with the increases ranging from a high of 28.9% in the Keyano region to a low of 8.3% in the Lakeland region.

Forecasted Population Growth by Service Region, All Ages

Geographic service region	Population		Change (2013 to 2023)	
	2013	2023	#	%
Calgary	1,485,832	1,864,840	379,008	25.5%
Central	315,133	374,556	59,422	18.9%
Edmonton	1,440,065	1,757,878	317,814	22.1%
Grande Prairie	158,735	187,419	28,683	18.1%
Keyano	79,107	101,945	22,838	28.9%
Lakeland	77,845	84,297	6,452	8.3%
Lethbridge	194,447	222,388	27,941	14.4%
Medicine Hat	112,415	129,611	17,197	15.3%
Northern Lakes	82,095	90,794	8,699	10.6%
Portage	79,400	86,897	7,497	9.4%
Alberta	4,025,074	4,900,625	875,551	21.8%

Note: Figures may not total due to rounding.
Source: Alberta Treasury Board and Finance, 2014.

While the overall population is expected to grow by 21.8%, the projected growth is lower for the prime post-secondary-attending cohort (18- to 34-year-olds). Over the next 10 years, the 18- to 34-year old population is expected to increase by 6.1% or 65,687 people. The Calgary (increase of 36,423) and Edmonton (increase of 24,572) service regions are expected to account for most of the increases, with 9.2% and 6.2% increases respectively from the 2013 levels. It is anticipated that most of the other regions will also have increases. However, the Keyano and Portage regions are likely to have decreases in the 18- to 34-year old population.

Forecasted Population Growth by Service Region, 18–34 Years

Geographic service region	Population		Change (2013 to 2023)	
	2013	2023	#	%
Calgary	396,695	433,118	36,423	9.2%
Central	78,844	84,093	5,249	6.7%
Edmonton	393,814	418,386	24,572	6.2%
Grande Prairie	44,039	44,786	747	1.7%
Keyano	28,222	21,985	– 6,237	– 22.1%
Lakeland	16,648	17,374	726	4.4%
Lethbridge	48,281	50,702	2,421	5.0%
Medicine Hat	26,931	28,358	1,427	5.3%
Northern Lakes	20,567	22,160	1,593	7.7%
Portage	19,832	18,607	– 1,225	– 6.2%
Alberta	1,073,873	1,139,560	65,687	6.1%

Note: Figures may not total due to rounding.
Source: Alberta Treasury Board and Finance, 2014.

Data at the regional level indicates that Calgary and Edmonton regions received the majority of intraprovincial migration (movement of people within Alberta) between 2004 and 2012. The trend of urbanization is expected to continue, with the share of population living in the census divisions of Calgary and Edmonton increasing from 69.6% in 2013 to 73.1% in 2041.[2]

The overall population increases and the increases in the primary post-secondary cohort are concentrated within the urban service regions of Edmonton and Calgary. This follows a global trend towards increased urbanization, and reflects the increasing enrolment levels among urban post-secondary institutions.

Growing urbanization in Alberta mirrors a global trend as people migrate to cities for economic and educational opportunities. Migration toward urban centres may translate into higher demand for seats at post-secondary institutions within these communities, and less demand in rural areas. Regional partnerships between urban and rural institutions may be an effective strategy for addressing this demand. As regional stewards and sizable institutions within their communities, rural/regional post-secondary institutions may be able to play a role in attracting talent to their communities and contributing to the long-term vitality and sustainability of these communities.

Population increase in Alberta is driven by migration. In 2013, Alberta's population had a net increase of 102,465 through migration—the highest level recorded in the past 40 years. This represented approximately three-quarters (76%) of Alberta's population growth in 2013.

Components of Population Growth in Alberta, 2013

Total population (Jan. 1, 2013): 3,948,242
Net interprovincial migration (43,161), 32%
Net international migration (59,304), 44%
Natural increase (31,864), 24%
Total population (Jan. 1, 2014): 4,082,571

Source: Alberta Treasury Board and Finance – Quarterly Population Report Fourth Quarter 2013.

Alberta gained 43,161 interprovincial migrants in 2013. Interprovincial immigration to Alberta in the past two years is similar to the historical peak period of 2005–2006. Alberta's net gain through international migration was 59,304 in 2013—the highest ever net international migration to Alberta. This represents the third consecutive year of sharp increase in international migration.[3] Alberta's share of new immigrants has increased every year since 2004. About 14% of the new immigrants who arrived in the first nine months of 2013 settled in Alberta.[4]

In-migration is expected to be the primary driver of Alberta's population growth in the future. For the period 2014 to 2041, total net migration is projected to account for about two-thirds of the population growth. This translates to 1.38 million people, of which almost 1 million would be international migrants. However, international immigration to Alberta is largely driven by federal immigration policies. Changes in federal immigration policies could affect the immigrant flow to Alberta. Canada's immigration policy and programs reflect a focus on attracting new immigrants with post-secondary education and technical skill sets. In 2014, the federal government aims to attract between 240,000 and 265,000 immigrants, a level similar to the previous year.[5]

Age Profile

Even though Alberta's population is one of the youngest among the provinces, its overall population is still aging due to rising life expectancy. The median age of Alberta's population is anticipated to climb from 36.0 in 2013 to 40.6 in 2041. Over the same period, the proportion of Albertans aged 65 and over is expected to rise to about 20% from only 11% in 2013.[6]

The rate of increase in the number of Albertans aged 65+ is expected to be greater than for the working-age population. The share of working-age population (aged 15 to 64 years) is anticipated to shrink from about 71% in 2013 to about 64% by 2041, resulting in an increase in the dependency ratio. The dependency ratio is a comparison between people not of working age (aged 0–14 and aged 65+) and people of working age (aged 15–64), expressed as the number of people not of working age per 100 working-age people. The total dependency ratio is expected to rise from 41.6 in 2012 to 55.0 by 2041.[7]

The aging population will likely mean that fewer Albertans are able to participate in the workforce. This shrinking workforce, combined with an increasing need for well-trained and educated workers, will make post-secondary education even more important for Alberta's future economic and social success.

More information on demographic trends, projections and population pyramid are available through Alberta Treasury Board and Finance website http://www.finance.alberta.ca/aboutalberta/demographics.html.

Aboriginal Peoples

According to the 2011 National Household Survey (NHS), 1,400,685 people had an Aboriginal identity in Canada. Aboriginal people represented 4.3% of the total Canadian population, which is higher than the previous censuses—3.8% in the 2006 Census, 3.3% in the 2001 Census and 2.8% in the 1996 Census.[8] Of the Canadians who identified themselves as an Aboriginal person, 60.8% identified as First Nations (North American Indian), 32.3% identified as Métis, 4.2% identified as Inuit, 1.9% reported other Aboriginal identities and 0.8% reported more than one Aboriginal identity. Aboriginal peoples represent one of the fastest growing segments of Canadian population. The Aboriginal population increased by 20.1% between 2006 and 2011, approximately five times compared to the 5.2% growth of non-Aboriginal population in the same period.[9] In addition to growing faster than the non-Aboriginal population, the Aboriginal population is also younger. In 2011, the median age of the Aboriginal population in Canada was 28 years, compared to 41 years for the non-Aboriginal population. Higher fertility rates and shorter life expectancy are some of main reasons for the Aboriginal population having a lower median age than the non-Aboriginal population.[10]

In Alberta, over 220,000 or 6.2% of total population identified themselves as an Aboriginal person, which is higher than the previous censuses—5.7% in the 2006 Census, 5.3% in the 2001 Census and 4.6% in the 1996 Census.* Alberta's Aboriginal population represents 15.8% of Canada's Aboriginal people—the third-highest proportion among provinces, after Ontario (21.5%) and British Columbia (16.6%). Of those who identified themselves as an Aboriginal person, 52.9% identified themselves as First Nations, 43.9% identified themselves as Métis, and 0.9% as Inuit. Among the service regions, the Edmonton region is home to more than one-third (36.1%) of Alberta's Aboriginal population, followed by Calgary (19.9%) and Northern Lakes (11.9%).[11] The median age of the Aboriginal population in Alberta was 25 years, compared to 37 years for the non-Aboriginal population. The median age of Aboriginal population in Alberta was also lower than the national average of 28 years.[12]

Aboriginal Population by Service Region, 2011

Geographic service region	Number of Aboriginal People	% of Alberta total	% of regional population
Edmonton	79,705	36.1%	6.2%
Calgary	43,945	19.9%	3.4%
Northern Lakes	26,810	12.1%	34.2%
Portage	15,060	6.8%	21.9%
Grande Prairie	14,345	6.5%	10.2%
Central	13,800	6.3%	4.9%
Lethbridge	12,585	5.7%	7.3%
Keyano	7,595	3.4%	11.3%
Medicine Hat	4,515	2.0%	4.4%
Lakeland	2,970	1.3%	4.2%
Alberta	220,695	100.0%	6.2%

Note: Figures will not total due to rounding.
Source: 2011 National Household Survey – custom tabulation.

* In addition to population growth, increased Metis self-identification could also be a factor in the increase in Aboriginal population. Also, note that some of the difference could be because of change in data source – Census in 1999/2001/2006 and National Household Survey in 2011.

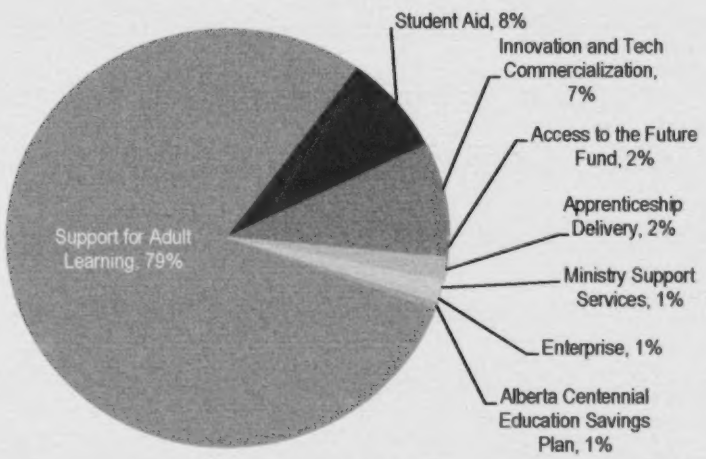
Economy

Budget 2014

The Government of Alberta's (GOA) 2014–15 budget contains an operational plan, a capital plan and a savings plan. The operational plan for 2014–15 includes operational revenue of $43.0 billion and total operational expenses of $40.4 billion, resulting in an operational surplus of $2.6 billion. Alberta's capital plan will invest $6.6 billion into infrastructure projects this year and a total of $19.2 billion over the next three years. The GOA savings plan is expected to grow the total savings to $26 billion by 2017.[13] Further details of GOA's Budget 2014 are available at http://finance.alberta.ca/publications/budget/budget2014/.

Innovation and Advanced Education's (IAE) operating budget for 2014–15 is over $2.85 billion, an overall increase of $150 million or 5.5% from the previous year. Alberta's publicly funded post-secondary institutions will receive $2.27 billion in operating funds; including $2.1 billion as base operating grants, an increase of $32.5 million from 2013–14. Approximately $241 million has been allocated for capital spending. The 2014–15 budget allocates $234 million for student aid, including $74 million in scholarships, $69 million in bursaries and grants, $45 million for debt management programs, $34 million for program support, and $11 million to support the Alberta Centennial Education Savings Plan. In addition, $408 million will be available as student loans in 2014-15. The budget also includes $203 million for innovation and technology commercialization.[14]

IAE Operational Expenses, Budget 2014


Student Aid, 8%
Innovation and Tech Commercialization, 7%
Access to the Future Fund, 2%
Apprenticeship Delivery, 2%
Ministry Support Services, 1%
Enterprise, 1%
Alberta Centennial Education Savings Plan, 1%
Support for Adult Learning, 79%

Source: Alberta Innovation and Advanced Education Business Plan 2014–17

Economic Outlook

The global economy experienced moderate growth of 3% in 2013. In 2014, global economic growth is expected to be 3.7%, buoyed by stronger performance in advanced economies and a return to sustainable growth in emerging markets. Nationally, the Canadian economy is expected to continue to grow in 2014. However, the growth is expected to be tempered at 2.5% in 2014 and 2015, and 2.3% in the medium term.[15]

Alberta's economy continued to experience growth in 2013, with an estimated real Gross Domestic Product (GDP) growth of 3.3%. Alberta's economic growth is expected to increase to 3.7% in 2014, fuelled by increased export demands and improved oil sands production. Following a period of historically strong growth, the housing market is expected to soften as population growth begins to slow. Alberta's labour market is forecasted to continue to lead the nation in 2014, with an expected pace of 2.6%. This follows 2013 where the average monthly job creation rate in Alberta outpaced the rest of Canada combined. As a result of this job growth and continued in-migration, the unemployment rate is expected to slightly decrease to 4.4%. The strong labour market is expected to continue to help population growth increase to 2.9% in 2014, eventually falling to 2.0% by 2017.[16]

While Alberta is expected to enjoy a period of strong economic growth, as a primarily resource-driven economy, small changes in oil and natural gas prices, exchange rates, or interest rates could substantially impact the government's revenues. Furthermore, Alberta's economic fortunes are also tied to global economic trends. Several factors could impact the province's economic growth, including expansion of alternative supplies of oil abroad, continued volatility in the Eurozone, the effect of growing consumer confidence on the US economy, and the vulnerability of emerging markets to financial shocks.[17]

Detailed economic outlook for the province is available as part of Government of Alberta's Budget 2014 publications: http://finance.alberta.ca/publications/budget/budget2014/fiscal-plan-economic-outlook.pdf.*

* The economic data included in this section is based on the GOA's 2014-15 budget, released on March 6, 2014. The government publishes quarterly fiscal updates to change or add to the information already in the budget. Readers are requested to refer to the quarterly update releases to get a more current picture of the economic estimates and trends (http://www.finance.alberta.ca/publications/budget/index.html).

Economy and Post-Secondary Enrolment

In Canada, the effects of past economic downturns on post-secondary enrolment have varied, with different types of post-secondary programs experiencing different changes. Enrolment in four-year programs has remained fairly consistent regardless of prevailing economic conditions, while other programs have seen their enrolment rates vary. The economic downturn resulted in significant decreases in apprenticeship registrations and course completions, whereas enrolment in shorter programs, such as certificate, diploma, or master's degree programs, has generally increased.[18,19]

Between academic years 2003–04 and 2007–08, the annual growth in Alberta's post-secondary enrolment (full-load equivalent) ranged from 0.6% to 1.5%. However, during the recessionary period (2008–09 and 2009–10) post-secondary enrolment increased by 3.0% and 5.2%, respectively—the largest increases since 2002–03. The increase in annual system-level enrolment for the post recessionary period (2010–11 to 2012–13) period ranged from –0.1% to 2.1%—slightly slower than the recessionary period.[20]

Demand for student financial assistance is dependent on both demand for post-secondary education and the strength of the economy. As post-secondary enrolment increases in periods of slow economic growth it is possible that financial assistance will be most needed when government revenues are decreasing.

Education

As technology advances, the demand for highly skilled and educated workers will increase. Alberta needs a workforce with a range of credentials, from high school to certificate programs to graduate degrees. There will be increasing pressure on individuals to maintain and upgrade their skills to keep pace with technology and change.

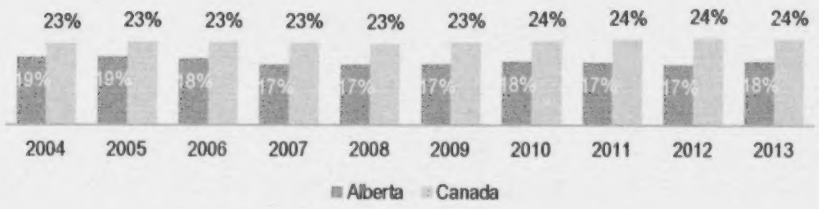
Post-secondary Participation

The post-secondary participation rate of Albertans aged 18 to 34 years was 18% in 2013. Alberta's post-secondary participation rate has hovered in the range of 17% to 19% over the past decade. The Canadian average was 24%—6 percentage points higher than Alberta's. This is in line with historical trends, with the national average being 4 to 7 percentage points higher than that of Alberta.

Alberta's strong labour market is a key factor in the low participation rate among its 18–34 year old population. In 2013, the employment rate (78%) for Albertans aged 18–34 during the school year (January to April, September to December) was 6 percentage points higher than Canadian average (72%).

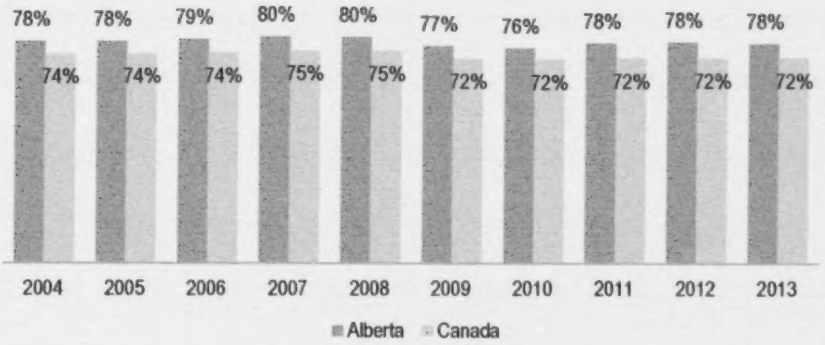
Another key factor is the province's status as a net gainer of migrants—both international and interprovincial—which increases the population base at a faster rate than enrolment. From 2004 to 2013, the total number of 18 to 34 year olds in Alberta increased by 26%, compared to 11% for Canada. During the same period, the number of Albertans participating in post-secondary education increased by 19%, slightly higher than that for Canada (17%). Since the post-secondary participation rate is calculated by dividing the number of 18- to 34-year-old students attending post-secondary education into the population base, a greater rate of population growth can keep the post-secondary participation rate low, even though enrolment levels are increasing. The majority of interprovincial migrants come to Alberta to work and are already in possession of the skills and training they need to participate in Alberta's labour market. Evidence of this pattern can be seen in the post-secondary educational attainment rates of the Alberta population, which are similar to the Canadian rates (see next section).

Post-secondary Participation Rate (18–34 year olds)



Source: Statistics Canada, Labour Force Survey (custom tabulation)

Employment Rate of 18–34 year olds (Jan. to Apr. and Sept. to Dec.)



Source: Statistics Canada, Labour Force Survey (custom tabulation)

Educational Attainment

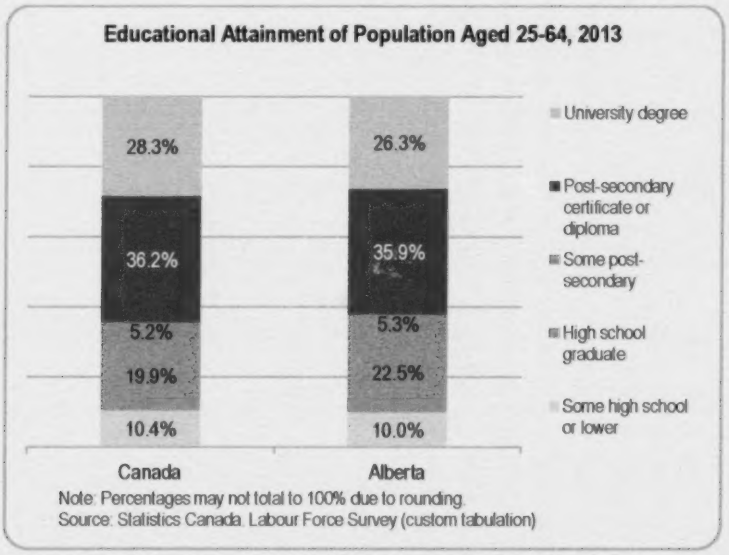
Provincially, 74.9% of Albertans complete high school within three years of entering Grade 10. As the length of time after entering Grade 10 increases, so does the completion rate, with 81.7% of Albertans completing high school within five years of entering Grade 10. High school completion rates vary across the province, from a high of 84.5% in the Lakeland region to a low of 68.7% in the Northern Lakes region in 2012–13.

High School Completion Rate by Service Region, 2012–13

Geographic service region	3-year rate	5-year rate
Calgary	78.1%	84.3%
Central	78.4%	83.9%
Edmonton	73.3%	80.3%
Grande Prairie	69.9%	79.3%
Keyano	74.2%	83.6%
Lakeland	75.4%	84.5%
Lethbridge	77.0%	83.1%
Medicine Hat	76.3%	83.0%
Northern Lakes	60.5%	68.7%
Portage	62.8%	74.6%
Alberta	74.9%	81.7%

Note: Results include all public, separate, charter, francophone, and private schools in Alberta with a high school program.
Source: Alberta Education

Alberta's post-secondary educational attainment level is similar to the Canadian average. In 2013, about one quarter (26.3%) of the Albertans aged 25 to 64 years had a university degree and an additional one third (35.9%) had a post-secondary certificate or diploma.



Note: Percentages may not total to 100% due to rounding.
Source: Statistics Canada, Labour Force Survey (custom tabulation)

In 2004, 56.4% of Alberta's population aged 25 to 64 years had completed some form of post-secondary education. By 2013, this proportion had increased to 62.2%. During the same time period Canada's population aged 25 to 64 years with post-secondary qualifications increased from 56.8% to 64.5%.[21] While Alberta is benefiting from its relatively strong economy, which continues to draw skilled migrants who already have education and training; its advanced learning system is competing with the strong labour market as some Albertans prefer to enter the labour market instead of pursuing post-secondary education.

Population Aged 25-64 Years with Post-secondary Education, Canada and Provinces

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Canada	56.8%	58.2%	59.0%	60.3%	60.8%	61.4%	62.5%	63.2%	64.1%	64.5%
Newfoundland and Labrador	53.6%	54.6%	54.2%	55.3%	56.0%	57.6%	59.8%	61.1%	62.6%	63.7%
Prince Edward Island	56.8%	56.0%	55.7%	55.2%	55.3%	56.7%	58.2%	60.0%	61.1%	61.8%
Nova Scotia	59.6%	59.0%	59.1%	59.8%	58.1%	60.5%	63.2%	63.1%	64.9%	65.5%
New Brunswick	51.8%	51.8%	52.8%	53.7%	55.2%	55.9%	55.8%	56.5%	56.9%	57.5%
Québec	57.1%	59.5%	60.5%	61.6%	62.2%	62.5%	64.2%	65.2%	67.0%	66.6%
Ontario	58.1%	59.3%	60.5%	62.2%	62.6%	62.9%	63.8%	64.4%	65.0%	65.8%
Manitoba	51.6%	52.1%	52.3%	51.8%	53.7%	54.1%	55.9%	55.7%	56.9%	56.2%
Saskatchewan	52.9%	53.9%	53.7%	53.8%	54.8%	55.6%	56.4%	56.3%	58.0%	58.2%
Alberta	56.4%	58.4%	58.3%	59.3%	60.0%	61.5%	61.9%	61.5%	61.6%	62.2%
British Columbia	55.7%	56.3%	57.2%	58.5%	58.9%	59.6%	60.7%	62.2%	62.9%	63.4%

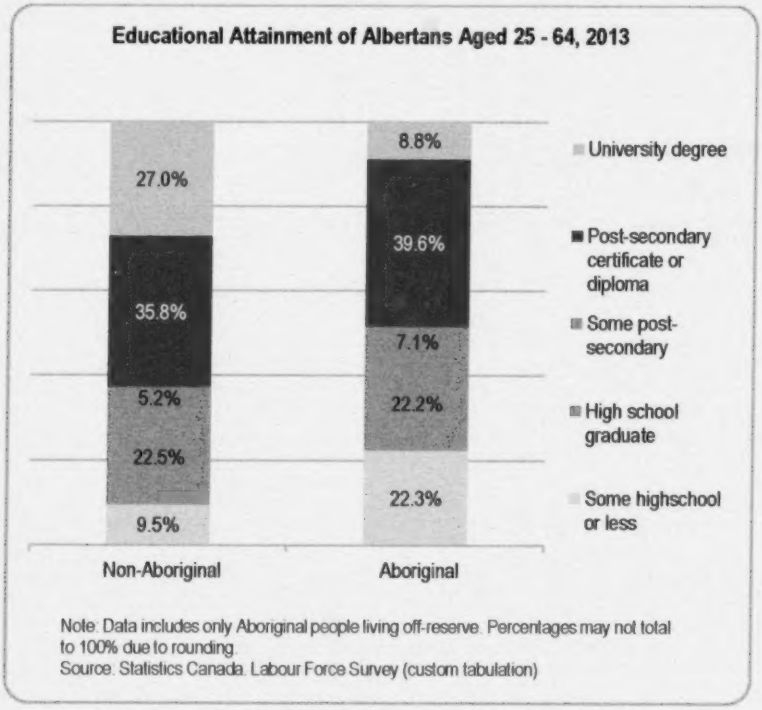
Source: Statistics Canada. Labour Force Survey (custom tabulation)

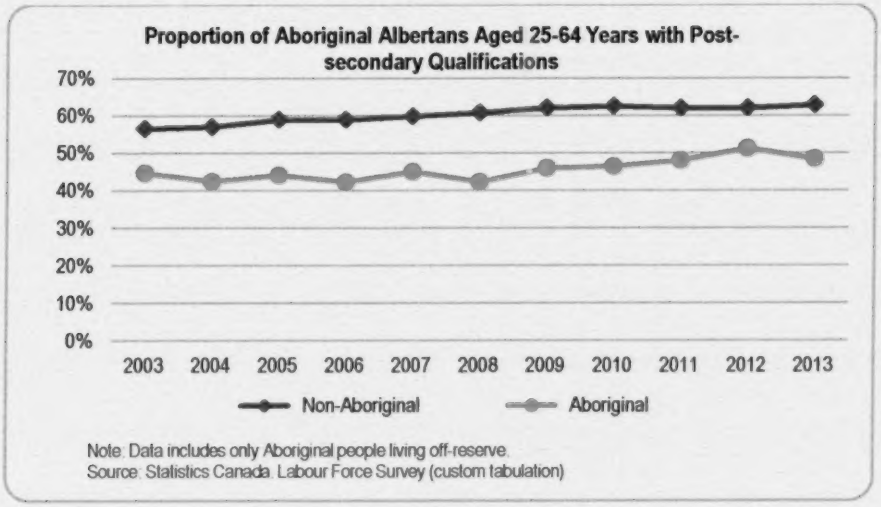
Results from the 2011 National Household Survey show that the proportion of those aged 25 to 64 years with post-secondary qualifications was highest in the Calgary (69.2%), Keyano (65.7%) and Edmonton (64.0%) service regions, followed by the Lethbridge (58.8%), Central (57.1%), Lakeland (56.2%), Portage (55.1%), Medicine Hat (54.4%), Grande Prairie (53.2%) and Northern Lakes (44.9%) service regions.

The Supply Outlook Model prepared by Alberta Jobs, Skills, Training and Labour projects that between 2013 and 2023 the number of Albertans with university credentials will increase at an average annual rate of 3.3%. The number of college and trade level graduates is expected to increase at an average annual rate of 1.8%.[22]

Aboriginal Educational Attainment

About one-quarter (22.3%) of Aboriginal Albertans living off-reserve have less than high school diploma as their highest level of education, more than twice the rate of non-Aboriginal Albertans. The proportion of those who have post-secondary qualifications, especially university degrees is lower among Aboriginal Albertans (48.4% vs. 62.8%). The proportion of Aboriginal people with post-secondary qualifications in Alberta (48.4%) is similar to that of Canada (49.3%). As Aboriginal Albertans are a growing, young population; strategies to support their access to post-secondary education and completion are a priority for the advanced learning system.





Note: Data includes only Aboriginal people living off-reserve.
Source: Statistics Canada. Labour Force Survey (custom tabulation)

Among the geographic service regions, the proportion of Aboriginal Albertans aged 25 to 64 years with post-secondary qualifications was highest in Medicine Hat (57.7%), slightly above the figure for non-Aboriginal population (54.3%). Other regions had lower proportions of Aboriginal peoples with post-secondary qualifications.

Proportion of Aboriginal Albertans with Post-secondary Qualifications, Service Regions

Geographic service region	2011	
	Aboriginal	Non-Aboriginal
Medicine Hat	57.7%	54.3%
Calgary	51.5%	69.7%
Edmonton	49.4%	64.8%
Keyano	47.8%	67.5%
Lethbridge	47.3%	59.5%
Central	46.8%	57.5%
Lakeland	46.4%	56.6%
Portage	43.1%	57.8%
Grande Prairie	40.2%	54.5%
Northern Lakes	30.3%	50.7%

Source: Statistics Canada. National Household Survey 2011 (custom tabulation)

Literacy, Numeracy and Problem Solving

Educational attainment and literacy skills affect people's ability to undertake daily tasks, obtain and maintain employment, and pursue further learning. Advanced educational attainment indicates a skilled, knowledgeable, and engaged population that is able to create and take advantage of economic opportunities. Alberta's ability to achieve social and economic progress is, in many ways, tied to educational attainment and literacy. Continuing high rates of literacy and educational attainment are vital for Alberta to maintain its competitive and innovative capacity, and maintain its high quality of life.

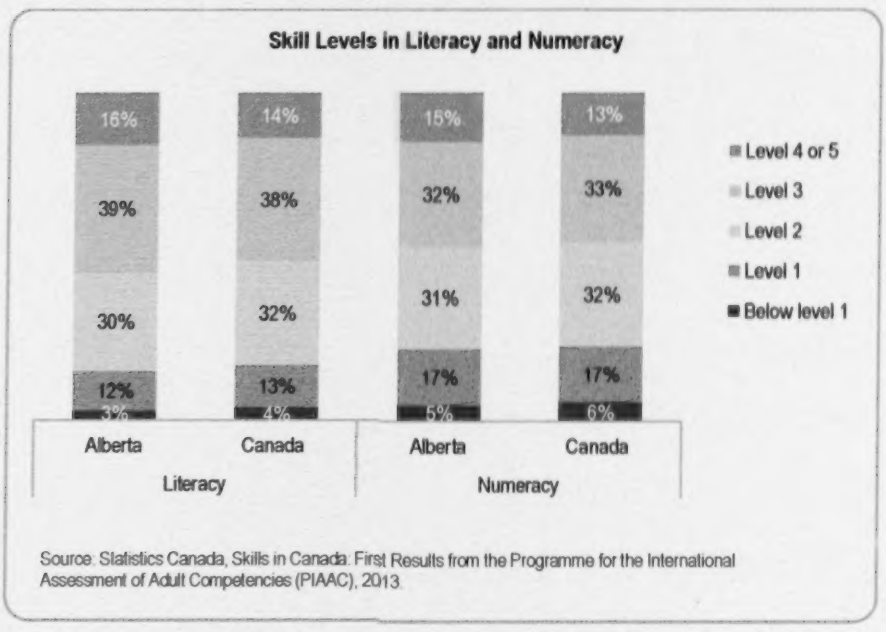
As societies evolve it is important to understand what skills people have and how those skills are being used. A nation's skillset can have profound impacts not only on economic standing, but also on economic disparities between different groups, health outcomes, and other areas such as political engagement. To promote an understanding of these challenges, Canada joined the Organisation for Economic Co-operation and Development (OECD) Programme for the International Assessment of Adult Competencies (PIAAC). This initiative provides internationally comparable measures of three skills essential for processing information: literacy, numeracy, and problem solving in technologically rich environments (PS-TRE). In 2013, Statistics Canada provided the first pan-Canadian report on PIAAC to present the distribution of these skills among Canadians and assess how these skills compare to other national populations[23].

Summary of Proficiency Levels

	Literacy	Numeracy	PS-TRE
Level 5	Able to search for and integrate information across multiple, dense texts and make high-level inference or use specialized background knowledge.	Tasks at this level require respondents to integrate multiple types of mathematical information; draw inferences; develop or work with mathematical arguments or models; and justify, evaluate or critically reflect upon choices.	Not Applicable
Level 4	Tasks at this level require multiple-step operations to integrate and interpret. Complex inferences may be needed to perform successfully.	Tasks require analysis and complex reasoning. Respondents must undertake multiple steps and choose relevant problem-solving strategies and processes.	Not Applicable
Level 3	Tasks require the respondent to identify, interpret, or evaluate one or more pieces of information and often require varying levels of inference.	Tasks require the respondent to understand mathematical information that may be less explicit, but may still require several steps and the use of problem-solving strategies.	Tasks at this level typically require the use of both generic and more specific technology and require multiple steps and operators. Goals and criteria may or may not be explicit, and integration and inferential reasoning may be needed to a large extent.
Level 2	Tasks at this level require respondents to make matches between text and information and may require paraphrasing or low-level inference.	Tasks at this level require respondents to identify and act on mathematical information and ideas embedded in a range of common contexts, where the mathematical content is fairly explicit, with relatively few distractors.	Tasks typically require both generic and specific forms of technology and may involve multiple steps and operators. The goal of the problem may have to be defined by the respondent, but criteria are explicit. Some distractors may be present and some integration and inferential reasoning may be needed.
Level 1	Tasks require recognizing basic vocabulary, determining the meaning of sentences and reading paragraphs with little, if any, competing information.	Tasks require the respondent to carryout basic mathematical processes where content is explicit, little text is present, and distractors are minimal.	At this level, tasks may require the use of widely available and familiar technology applications. Little or no navigation is required to access the information or commands required to solve the problem, and tasks require few steps with minimal operators. Only simple forms of reasoning are required.
Below Level 1	Only basic vocabulary knowledge is required and it is not essential to understand the structure of sentences or paragraphs.	Respondents are only required to carry out very simple processes such as counting, sorting, or performing basic arithmetic operations in concrete and very explicit texts.	Tasks are based on well-defined problems involving the use of only one function with generic interface to meet one explicit criterion without any categorical, inferential reasoning or transforming of information. Few steps are required and no sub-goal has to be generated.

Note: PS-TRE has an additional category: *PS-TRE non-respondents*—This category includes those individuals who did not report previous experience with a computer, or opted not to be assessed by a computer-based test.
Source: Statistics Canada. Detailed description of the proficiency levels are available at http://www.statcan.gc.ca/pub/89-555-x/89-555-x2013001-eng.pdf

According to the first results of the PIAAC, 55% of Albertans aged 16-65 performed at literacy Level 3 or better in 2012, above the Canadian average of 52%. Alberta also outperforms the OECD average, while Canada ranks just above the OECD average. Approximately 47% of Albertans aged 16-65 performed at numeracy Level 3 or better, slightly above the Canadian average of 46%. Alberta ranks comparably to the OECD numeracy average, whereas nationally Canada trails slightly behind. When comparing population scores for literacy and numeracy between Alberta and Canada, there are no substantial differences between age groups or gender. However, literacy scores in Alberta are higher than the national average when both parents were born in Canada; while there were no differences in numeracy scores. With strong literacy skills, people are more adaptable to changing circumstances, less vulnerable to economic shocks, and more able to acquire new skills, whether through formal learning or on-the-job training.



Source: Statistics Canada, Skills in Canada: First Results from the Programme for the International Assessment of Adult Competencies (PIAAC), 2013.

Over the past 5 years, enrolment in degree programs has increased at an average annual rate of 4.3%. Among the various degree program types, enrolment in bachelor's, master's and doctoral programs increased, while enrolment in applied degree program decreased. Enrolment in certificate programs decreased from 2008–09 to 2011–12 but bounced back in 2012–13, whereas enrolment in diploma programs registered a substantial increase in 2009–10 and then plateaued. Over the past 5 years, enrolment in non-credential program types decreased at the rate of –2.6%, with enrolment showing a declining trend across most non-credential program types.

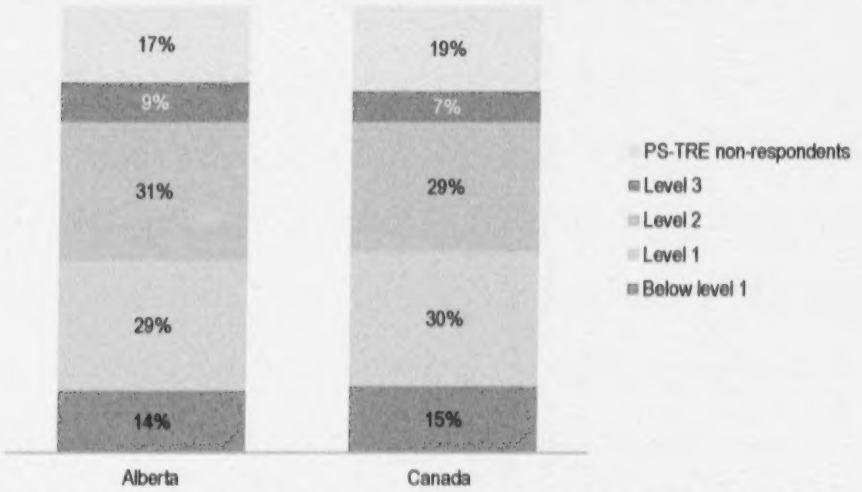
Enrolment by Credential Type (FLE)

Credential	Program Type	2008–09	2009–10	2010–11	2011–12	2012–13	Average annual change
Certificate	Journeyperson	8,889.2	8,024.3	7,409.7	6,880.8	7,278.8	-5%
	Occupational	7,366.0	7,946.8	7,968.8	7,982.6	7,949.2	2%
	Post-Baccalaureate/Basic/Diploma/Master's/ Doctoral	2,009.9	2,092.7	2,291.1	1,593.1	2,186.2	5%
	Pre-Employment	262.0	354.1	360.9	315.2	293.2	4%
	All Certificate Program Types	18,527.2	18,417.8	18,030.5	16,771.6	17,707.5	-1.0%
Degree	Applied	3,766.6	3,380.3	3,205.1	2,789.9	2,420.6	-10%
	Bachelor's	59,900.8	64,824.3	68,449.0	70,290.6	72,092.5	5%
	Doctoral	4,124.0	4,521.4	4,692.8	4,852.1	5,314.7	7%
	Master's	8,055.9	9,076.1	9,317.7	9,695.5	10,006.4	6%
	All Degree Program Types	75,847.3	81,802.1	85,664.7	87,628.1	89,834.2	4.3%
Diploma	Occupational	25,175.2	27,040.7	27,166.5	27,220.4	27,303.1	2%
	Post-Baccalaureate/Basic/Doctoral/Master's	125.9	145.6	147.0	183.4	228.2	16%
	All Diploma Program Types	25,301.1	27,186.3	27,313.6	27,403.8	27,531.4	2.2%
Non-Credential	Academic Upgrading	6,904.5	7,456.6	6,704.6	6,328.1	6,040.0	-3%
	Adult Basic Education	346.3	310.7	261.5	245.6	293.7	-3%
	Integrated Training	34.5	40.0	22.3	12.7	10.4	-22%
	Occupational	844.4	796.0	777.4	692.6	701.5	-4%
	Open Studies	9,966.6	9,656.5	9,442.8	9,164.5	9,100.8	-2%
	Professional Development	110.5	91.1	74.3	94.4	92.0	-3%
	Second Language Learning	3,461.9	3,686.7	3,114.0	3,194.2	3,694.8	2%
	University Transfer	5,095.4	4,502.7	4,569.8	4,297.1	4,148.2	-5%
	All Non-Credential Program Types	26,764.2	26,510.3	24,966.5	24,029.0	24,081.3	-2.6%
All Credentials		146,439.8	153,916.5	155,975.2	155,832.5	159,154.4	2.1%

Notes: Does not include The Banff Centre.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.

A higher proportion of Albertans and Canadians engage with information and computer technologies than in other OECD countries. Approximately 40% of Albertans surveyed and 37% of Canadians scored at Levels 2 or 3 on the Problem Solving in Technology Rich Environment (PS-TRE) scale, above an OECD average of 34%. This is especially noteworthy since higher information-processing skills can have a positive impact on labour market outcomes, such as earnings and employment rates, especially given the prevalence of new technologies in the workplace in recent decades.

Skill Levels in Problem Solving in Technologically Rich Environments



Source: Statistics Canada, Skills in Canada: First Results from the Programme for the International Assessment of Adult Competencies (PIAAC), 2013.

Overall, higher education is strongly associated with greater literacy, numeracy and PS-TRE skills, especially for those with post-secondary education—Bachelor's degree or higher. Literacy scores in Alberta for those without a high school diploma are higher than the national average, whereas numeracy scores are similar to the national average. Literacy and numeracy performance may also be linked to parents' level of education; the average scores for those whose parents both have post-secondary education were significantly higher than those whose parents both have a high school diploma or less. This finding was consistent across Canada.

CROSS-JURISDICTIONAL TRENDS IN ADVANCED LEARNING

Environmental scanning is a technique that researchers use to gather information about relevant trends and issues that are occurring around the world. This information is collected through reports, news items, opinion pieces, statistical reports, event and conference proceedings, and academic papers. Any issues, events, practices or initiatives that occur frequently in numerous jurisdictions are categorized as trends and assessed for their relevance to a particular topic. In this case, information has been gathered on trends that are either occurring within advanced learning systems around the world (including Alberta) or are occurring in other environments (such as social media or legislative environments) that are likely to impact Alberta's advanced learning system. This information is not provided to indicate any desired policy directions, but rather is intended to spark discussion and innovation. These trends are also intended to add a forward-looking lens to existing trends and data that may help institutions anticipate what changes will unfold over the next several years in PSE around the world. Awareness of these unfolding trends may assist institutions with their planning processes and increase environmental and contextual awareness as they craft future plans. Awareness of existing and developing trends may also help institutions remain flexible and inventive in times of rapid and widespread change.

Those observed trends that are deemed to have some relevance to, or impact on, Alberta's advanced learning system are summarized below:

Increased Legislation and Standardization for Interns and Internships

- Recognition of the right for students to be compensated for some types of workplace training and experiential learning is increasing in several jurisdictions across the world[24],[25] and Canada is no exception. Recently, the Ontario Labour Relations Board shut down unpaid internships at the Walrus and Toronto Life and ruled that interns who agree not to be paid may still be entitled to wages if the work they perform more closely resembles labour rather than training.[26] In Sandhu v. Brar, a recent court case addressing the issue of unpaid workplace learning, a co-op student at a computer services company filed a claim with the Ministry of Labour for unpaid wages.[27] The Board found the training provided to Mr. Brar was not comparable to the training he would receive at a vocational school in order to become a computer technician.[28] As a result, the Board ruled that Mr. Brar was entitled to pay for his work.

- Currently, no government agency collects data on internships in Canada, so it is difficult to know how many people are actively participating in internship programs or even how many of these programs could properly be described as internships. Since some employers are federally regulated, while others fall under provincial labour codes, jurisdictional responsibility for internships remains uncertain and complex. Furthermore, since education is a provincial responsibility (as are many areas of employment) there is no consistent, national consensus on what defines an internship*. However, several organizations are broaching the issue and attempting to create parameters around what an internship should and should not be. Recently, the Higher Education Quality Council of Ontario released an analysis of 369 internship programs across the province in an attempt to find a unifying set of criteria for determining what counts as an internship.[29] The study found that there is significant variation in what was being counted as an internship and the Council recommended greater clarity and consistency in the roles and responsibilities for students, institutions, and employers involved in the internship.

- In Alberta, the Ministry is partnering with Jobs, Skills, Training and Labour (JSTL) to develop definitions for internships and work-integrated learning. JSTL is also currently reviewing minimum standards for internships and for work-integrated learning under the *Employment Standards Code*.

Augmented Reality and 3-D Printing

- Augmented reality is a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view.[30] The incorporation of augmented reality, or AR, into classroom learning is an emerging trend in several areas of advanced learning. For example, student nurses at the City University of London are participating in "health walks" run by the Creating Augmented Reality in Education (CARE) program, where they use the GPS function on their phones or tablets in conjunction with AR to discover the health risks as they walk around.[31] The University of Manchester Library used AR to create the SCARLET Project which gave students the ability to view special collection materials that would otherwise be inaccessible.[32] In Canada, students in the Architectural Science program at Ryerson are using AR to superimpose their architectural plans on top of real landscapes[33] and the University of Alberta is working on a Multi-Modal Augmented Reality for Training Healthcare Professionals project that would allow those training in health care fields to simulate real-life healthcare procedures.[34]

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*While the Canadian Association for Co-Operative Education (CAFCE) has created a definition for co-operative education, it is unclear whether this definition also includes other work integrated learning models such as practicums and internships.

- Also called rapid prototyping or additive manufacturing, 3-D printing takes a digital design and forges that design into a 3-dimensional object, often in thin, flat cross-sections that are then assembled into a larger whole.[35] This process gives students access to materials and objects that would traditionally not be available to them during their learning process. 3-D printing is being incorporated into a wide range of disciplines, including engineering, medicine, biology, and architecture. For example, the Surgical Simulation Research Lab at the University of Alberta has partnered with the Emily Carr University of Art and Design to print 3-D, life-size models of organs and bones that surgical students can use to prepare for complex surgeries.[36] These models can be produced at significantly lower cost, due to the fact that they can be manufactured in-house. NAIT also has a 3D printer which is used to enhance its work in nanotechnology development at its Nanotechnology Centre for Applied Research, Industry Training and Services (nanoCARTS).[37] In the United States, the University of Virginia School of Engineering and Applied Science is helping its mechanical engineering students discover the principles of dynamics using 3D printers that create actual machine parts.[38]

Growing Use of Social Media Technologies

- Social media technology (SMT) refers to web-based and mobile applications that allow individuals and organizations to create, engage, and share new user-generated or existing content, in digital environments through multi-way communication.[39] According to a recent study by Huron Education in the United States, about 82% of colleges and universities use Twitter, 75% use LinkedIn, and 71% use YouTube.[40] A study conducted by the University of Massachusetts Dartmouth found that 100% of surveyed universities and colleges use social media for some purpose.[41] Other forms of social media are also quickly growing in popularity. Both Instagram and Pinterest were used by more than a quarter of institutions.[42] In Canada, post-secondary institutions have shown a similar upsurge in social media use[43]

- While social media is still used primarily for institutional publicity marketing campaigns, it is starting to be used as a vehicle for sharing information, and facilitating collaborative discussions about various research and study topics. For example, Murdoch University in Australia has collaborated with Duke University to create The Coastal Walkabout, a social mapping project that allows students from both institutions to share their observations about Northwestern Australian ecosystems.[44] In Sweden, a group of students established at the Swedish Twitter University, where approximately 500 students follow lectures that are delivered in a series of tweets.[45]

Unbundling of Credential Attainment

- Unbundling is the differentiation of tasks and services that were once offered by a single provider (i.e., bundled) and their subsequent distribution among multiple providers.[46] Although there can be many types of unbundling that occur in advanced learning contexts (i.e. institutions unbundling where services such as teaching, advising, assessment, and enrollment management are separated into exclusive domains),[47] in this particular context, unbundling refers to credential unbundling where students earn a credential from more than one provider using more than one learning delivery model.

- Students are now more likely to take a Massive Open Online Course (MOOC), study abroad, take an apprenticeship or internship, or participate in a combination of these learning experiences.[48] For example, Enstitute,[49] a two-year program in New York City, places students in full-time apprenticeships and builds a curriculum around their work on topics including finance, history, computer programming, and sociology. Students spend Monday to Friday on the job, while supplementing their work experience with online and in-person curricula outside of work hours. In addition, they are required to participate in weekly community and networking events as well as mentoring sessions with their employers. There are some questions about the effectiveness of supplementing or exchanging in-class learning with MOOCs, since several recent studies[50], [51] have found that completion rates for MOOC courses are extremely low, often running at below 7%.[52] As a result of concerns over completion rates, some MOOC platforms are adding new or additional fees intended to keep students more invested in their courses.[53] As well, providers such as EdX are conducting their own research into which factors may influence student attrition rates.[54]

Using Big Data to Enhance Learning Analytics

- Learning analytics is the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs.[55] This is not a new practice, but advances in data management software are allowing institutions to distill ever increasing amounts of this data – also termed "big data" – into usable information that allows institutions to observe patterns of student behaviour over time and make projections about how students may behave in the future. For example, Athabasca University is also using large amounts of data to observe trends and improve learner achievement through its Technology Enhanced Knowledge Research Institute.[56] At Eastern Connecticut State University, researchers are using large volumes of data collected from sources such as library usage, tutoring programs, and surveys to determine and predict why retention rates are higher for some students than others.[57] This information is then used to create targeted intervention strategies aimed at improving outcomes for vulnerable students and prevent future students from encountering the same problems. At the University of Wisconsin, the pilot program Student Success System (S3) was initiated in spring 2013 to identify struggling students and behavioral patterns.[58] The intention of the project is to gather information on students that can help the institution monitor student performance and identify situations where early intervention might prevent student attrition.

- In Alberta, big data is also being used to track student outcomes. In particular, IAE is currently working on several projects that link Alberta's Post-secondary Student Information System (PSIS) data with tax data to examine graduates' labour market outcomes.

Competency-Based Degrees

- Competency-Based Education (or CBE) is a new educational model that assesses students on acquired skills, or competencies rather than on time spent in a classroom or with an instructor.[59] Learning is performed independently and proficiency must be demonstrated through the completion final assessments such as exams or research papers.[60] These assessments can be completed at any time, allowing students to progress at their own pace.[61] Some CBE programs also offer credit for prior learning and experience, making CBE particularly appealing to working adults who want to upgrade skills or acquire new credentials.[62] Recently, the U.S. Department of Education announced that it would give federal aid eligibility to institutions that offer competency-based degrees,[63] signaling an increase in federally-sanctioned support for programs that allow students with professional experience the opportunity to circumvent certain courses on their way to getting a degree. In some cases, competency-based degrees maintain a traditional credit-hour structure, but other institutions are trying a new approach called direct assessment where, in lieu of seat time (or credit hours), student progress is assessed based on direct measures of academic knowledge, regardless of how long students have been learning or where they acquired their previous knowledge.[64]

- So far, only a few institutions are trying the direct assessment model,[65] but many institutions in the U.S have begun to integrate the credit-hour learning structure with competency-based assessment. The University of Wisconsin will be the first public university to offer a competency-based degree in high-demand areas such as IT, health-care and advanced manufacturing.[66] In Canada, the Royal College of Physicians and Surgeons of Canada has implemented its Competency by Design program which will use a competency-based medical education to assess learning in residency and specialty practice programs across the country.[67] So far, competency-based programs have not been adopted at post-secondary institutions in Canada. According to a paper recently released by the Higher Education Quality Council of Ontario, there are several structural differences between education systems in Canada and the United States (for example, fewer people in the United States have post-secondary qualifications and the labour market is currently more stagnant in America) that make the employment-training model of competency-based education more suitable for the United States than Canada.[68] However, with the continued change in educational delivery models, awareness and research surrounding this new type of delivery model have certainly increased within Canada.

Flipped Classrooms

- Simply put, in the flipped classroom model, homework is completed in class and lectures are delivered at home.[69] In most flipped classroom models, lectures are delivered online and usually only last 10 minutes. At the end of the lecture, students are given a quiz to test comprehension. In class, students are required to complete assignments under the supervision of their instructors.

- Advocates of the flipped classroom believe that shorter, more condensed lectures that allow students to start, stop, and repeat content are more effective to learning than traditional longer, in-class lectures.[70] As well, homework assignments conducted in class allow for immediate feedback, and reduce student-instructor interaction outside of class time.[71]

- This learning model tends to use a more team-based approach, with a high level of student interaction. However, research from the University of Michigan suggests that in subjects such as pharmacology, which require a great deal of memorization, team-based learning may not be as effective as individual study.[72] In addition, some critics are concerned that the online lectures prevent students from adequately interacting with their instructors,[73] and suggest that classes can be more expensive due to the extra tutors required to provide supervision during in-class assignments.[74]

A LEARNER ENABLING SYSTEM

The Roles and Mandates Policy Framework* for Alberta's Publicly Funded Advanced Education System—released in 2007—is the foundation of Campus Alberta. The concept of Campus Alberta describes post-secondary education and training providers working together to meet the needs of learners, taxpayers, and society, advancing Alberta's competitiveness in a global economy. The ultimate goals of Campus Alberta are to increase access and better serve learners, achieve efficiencies, leverage expertise, and maximize available resources.[75] †

Learners are the core beneficiaries of an integrated advanced learning system. Campus Alberta partners deliver accessible and affordable high quality learning opportunities, building pathways within their institutions and with other institutions and community partners for learners to get the education or training they need—how, where, and when they need it. Tax payers are well served through a quality advanced learning system that provides a high return on their investments. In many cases cooperation offers better learning outcomes allowing institutions to focus on areas of strength while leveraging the strengths of others. Society benefits when human potential is realized. From basic literacy training to job readiness, and apprenticeship training to graduate and post-graduate studies, Campus Alberta is at the centre of developing the province's knowledge-driven economy, enhancing Alberta's competitiveness and ultimately, contributing to a bright future for all Albertans.[76]

Publicly funded post-secondary institutions are the cornerstones of Campus Alberta. They support the same set of principles and work together to create a learner-centered system that is accessible, affordable, innovative, responsive and relevant, sustainable, and promotes excellence. Private providers, community-based organizations, and industry also provide diverse learning opportunities within and in support of Campus Alberta. No matter the provider, each has a role in making Alberta a great place to learn and grow. Campus Alberta is also supported by Alberta Innovates‡ and the industry.[77]

Campus Alberta's 26 publicly funded post-secondary institutions are categorized into six sectors, each with corresponding roles and mandates. Institutional differentiation among sectors is based largely on credentials offered, type and intensity of research activity, and geographic focus. It is also recognized that institutions differ within each sector according to programs and specializations, institutional strengths, strategic priorities, client groups served, geographic region served, and delivery models utilized.

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* For more information, see the Roles and Mandates Policy Framework for Alberta's Publicly-Funded Advanced Learning System, available online at http://eae.alberta.ca/post-secondary/policy/roles.aspx.

† For more information, see Guidelines for Board of Governors Members: An Introduction to Board Governance at Alberta's Public Post-Secondary Institutions http://eae.alberta.ca/media/383080/board%20manual%20complete%202014-01-23.pdf.

‡ Alberta Innovates consists of an advisory body comprised of provincial and international representatives, the Alberta Research and Innovation Authority, and four publicly funded corporations: Alberta Innovates – Bio Solutions, Alberta Innovates – Energy and Environment Solutions, Alberta Innovates – Health Solutions, and Alberta Innovates – Technology Futures.

The six sectors are Comprehensive Academic and Research Institutions (CARIs), Baccalaureate and Applied Studies Institutions (BASIs), Polytechnical Institutions (PIs), Comprehensive Community Institutions (CCIs), Independent Academic Institutions (IAIs), and Specialized Arts and Culture Institutions (SACIs).

Comprehensive Academic and Research Institutions (CARIs)

- Athabasca University
- University of Alberta
- University of Calgary
- University of ! ethbridge

Baccalaureate and Applied Studies Institutions (BASIs)

- Grant MacEwan University
- Mount Royal University

Polytechnical Institutions (PIs)

- Northern Alberta Institute of Technology
- Southern Alberta Institute of Technology

Comprehensive Community Institutions (CCIs)

- Bow Valley College
- Grande Prairie Regional College
- Keyano College
- Lakeland College
- Lethbridge College
- Medicine Hat College
- NorQuest College
- Northern Lakes College
- Olds College
- Portage College
- Red Deer College

Independent Academic Institutions (IAIs)

- Ambrose University College
- Canadian University College
- Concordia University College of Alberta
- St. Mary's University College
- The King's University College

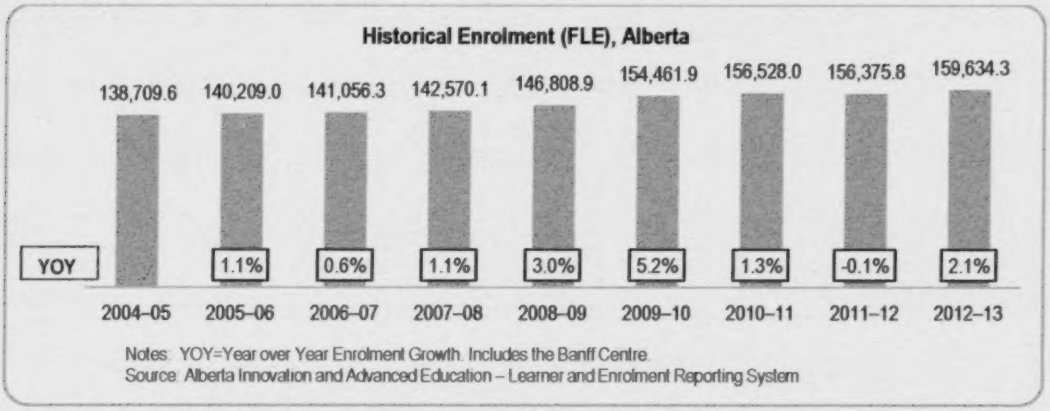
Specialized Arts and Culture Institutions

- Alberta College of Art and Design
- The Banff Centre

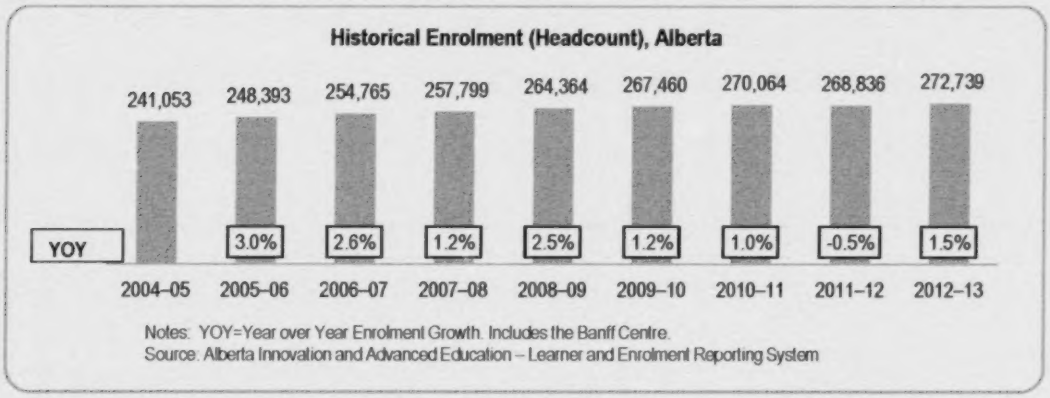
Post-secondary Enrolment

IAE uses the Learner and Enrolment Reporting System (LERS) system to capture information about students and enrolment in all approved programs offered by publicly funded post-secondary institutions in Alberta. LERS presents enrolment data using two different methods—headcount enrolment and full-load equivalent (FLE) enrolment. Headcount enrolment counts the actual number of students in post-secondary education. The FLE measure looks at the course load students take, with one FLE representing the equivalent of what a standard student taking a standard full load would generate during an academic year (fall and winter terms). An FLE value of 1.0 means that the student is taking the equivalent of a full course load for a standard program. A student taking a portion of the program would generate less than 1.0 FLE. Reporting enrolment data as FLEs helps to reflect system capacity and allow enrolment comparisons across various programs and institutions.

Enrolment in Alberta's publicly-funded advanced learning system has increased over the years. The reported FLE enrolment has had an average annual increase of 1.8% and headcount enrolments increased by an average of 1.6% per year from 2004–05 to 2012–13. Recent enrolment trends suggest that when Alberta's economy is booming (2004 to 2008), enrolment increases are smaller than when the economy cools (2008 to 2010). In other words, more Albertans might pursue post-secondary education/training at times when there are fewer employment opportunities available.



Notes: YOY=Year over Year Enrolment Growth. Includes the Banff Centre.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System

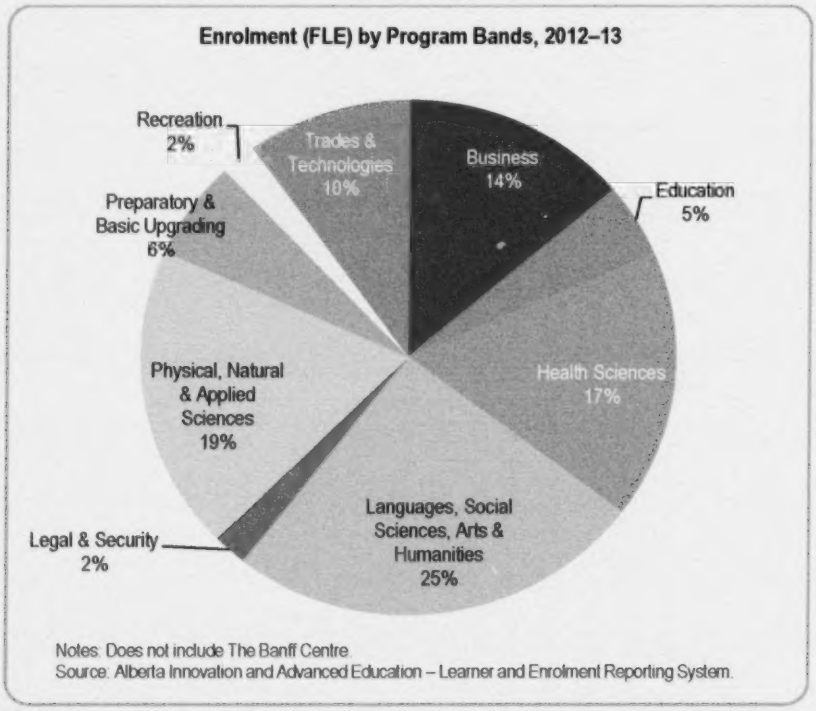


Notes: YOY=Year over Year Enrolment Growth. Includes the Banff Centre.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System

Enrolment by Program Bands

Programs offered by Alberta's post-secondary system are classified into nine program bands. The program bands are developed based on rollups of Statistics Canada's Classification of Instructional Programs (CIP) 2011 categories. Further details of program bands are presented in Appendix A3.

At the system level in 2012–13, Languages, Social Sciences, Arts & Humanities is the largest program band, accounting for 25% of enrolment (FLE); followed by Physical, Natural & Applied Sciences (19%); Health Sciences (17%); Business (14%); Trades & Technologies (10%); Preparatory & Basic Upgrading (6%); Education (5%); Legal & Security (2%) and Recreation(2%). These proportions have remained stable over the past 5 years.


Enrolment (FLE) by Program Bands, 2012–13
Recreation 2%
Trades & Technologies 10%
Business 14%
Education 5%
Preparatory & Basic Upgrading 6%
Physical, Natural & Applied Sciences 19%
Health Sciences 17%
Languages, Social Sciences, Arts & Humanities 25%
Legal & Security 2%
Notes: Does not include The Banff Centre.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.

While the relative sizes of the program bands have remained stable, the growth rates have varied somewhat over the past 5 years. Enrolment in most program bands increased in the past 5 years, with Physical, Natural & Applied Sciences (4.6%) and Health Sciences (4.6%) program bands experiencing the highest average annual growth rate. Enrolment in Trades & Technologies decreased from 2008–09 to 2011–12, but bounced back in 2012–13. Declines were most notable in Preparatory & Basic Upgrading programs, where the enrolment declined by an average of 2.8% annually over the past 5 years.

Enrolment by Program Band (FLE)

Program bands	2008–09	2009–10	2010–11	2011–12	2012–13	Average annual change
Business	20,618.9	21,695.2	21,981.8	21,628.8	21,891.1	1.5%
Education	6,755.2	7,115.8	7,283.7	7,392.3	7,394.0	2.3%
Health Sciences	22,451.5	25,138.3	26,269.8	26,264.9	26,790.7	4.6%
Languages, Social Sciences, Arts & Humanities	37,868.6	39,380.5	40,265.4	40,475.2	40,246.0	1.5%
Legal & Security	2,833.0	2,954.1	3,218.6	3,248.1	3,293.8	3.9%
Physical, Natural & Applied Sciences	25,446.9	27,237.0	28,162.5	28,709.9	30,451.6	4.6%
Preparatory & Basic Upgrading	11,132.1	11,768.6	10,354.8	9,796.3	9,825.9	-2.8%
Recreation	2,993.6	3,164.2	3,381.2	3,398.9	3,439.5	3.6%
Trades & Technologies	16,340.1	15,462.9	15,057.4	14,918.1	15,821.8	-0.7%
All Program Bands	146,439.8	153,916.5	155,975.2	155,832.5	159,154.4	2.1%

Notes:
1. Does not include data for the Banff Centre.
2. Details of program bands are presented in Appendix A3.

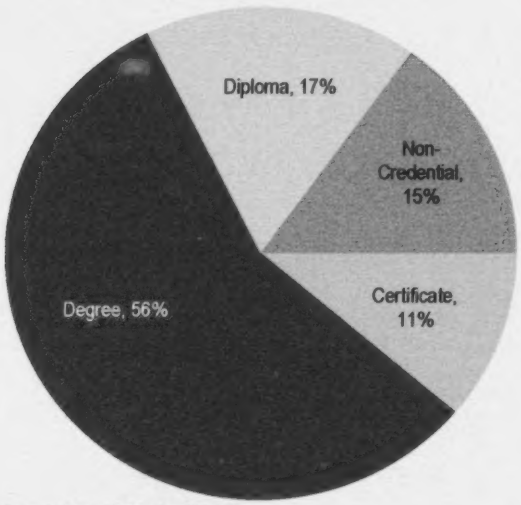
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.

Enrolment by Credential Type

Innovation and Advanced Education collects information on Ministerially approved programs within Alberta based on four credential types: non-credential, certificate, diploma, and degree. Each credential type is further broken down into a program of study. The Provider and Program Registry System (PAPRS) enables institutions to select the type of credential, and program type for new program offerings. The program records within PAPRS are used for students to access loan funding and form the basis of annual institutional reporting through the Learner and Enrolment Reporting System. This reporting is used to present the data below.

The majority (56%) of post-secondary enrolments (FLE) in 2012–13 were for degree programs. Diploma programs accounted for 17% of enrolments, 11% of enrolments were in certificate programs, and 15% of enrolments were in non-credential programs. The share of degree program in total enrolment increased from 52% in 2008–09 to 56% in 2012–13, whereas share of non-credential programs decreased from 18% to 15%.

Enrolment (FLE) by Credential Type, 2012–13



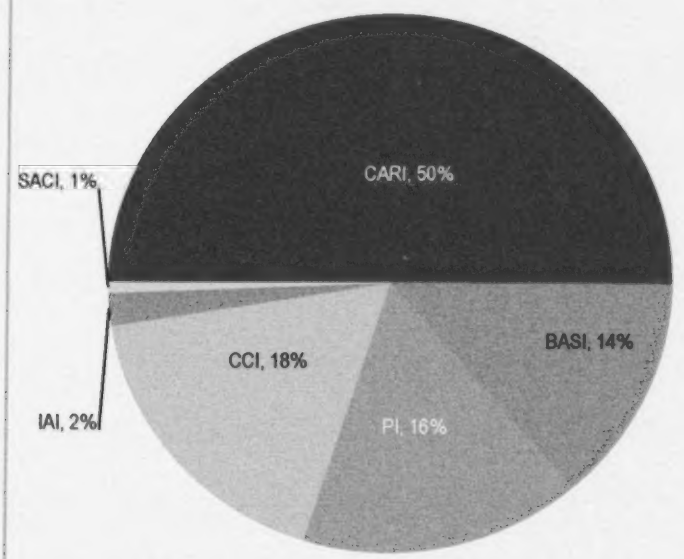
Notes: Does not include The Banff Centre.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System

Enrolment by Sectors

Campus Alberta's 26 publicly funded post-secondary institutions are categorized into six sectors—Comprehensive Academic and Research Institutions (CARIs), Baccalaureate and Applied Studies Institutions (BASIs), Polytechnical Institutions (PIs), Comprehensive Community Institutions (CCIs), Independent Academic Institutions (IAIs), and Specialized Arts and Culture Institutions (SACIs).

In 2012–13, CARIs accounted for half (50%) of all credit-program enrolments (FLE) in Alberta's advanced learning system, followed by CCIs (18%), PIs (16%), BASIs (14%), IAIs (2%), and SACIs (1%). The share of enrolment of these sectors has remained similar in the past 5 years.

Enrolment (FLE) by Sectors, 2012–13



Notes: Does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education – LERS

In general, most sectors have shown an increasing trend in enrolment in the past 5 years. Enrolment in CARIs and IAIs increased every year for the past 5 years, while enrolment in BASIs increase from 2008–09 to 2010–11 and then stabilized.

Enrolment in PIs fluctuated over the five years, but the overall trend is flat. CCIs had an enrolment increase in 2009–10, but enrolment has declined since then. Enrolment SACI has remained consistent over the years with minor fluctuations.

Enrolment by Sector (FLE)

Sector	2008–09	2009–10	2010–11	2011–12	2012–13	Average annual change
Comprehensive Academic and Research Institutions	71,442.3	74,523.3	76,354.8	77,079.0	79,679.6	2.8%
Baccalaureate and Applied Studies Institutions	19,176.9	20,827.3	21,736.5	21,495.2	21,675.6	3.2%
Polytechnical Institutions	25,401.3	24,831.4	25,354.3	25,064.9	25,740.3	0.4%
Comprehensive Community Institutions	26,591.6	29,781.2	28,483.0	28,094.7	27,955.0	1.4%
Independent Academic Institutions	2,842.8	2,954.1	3,043.3	3,102.7	3,146.2	2.6%
Specialized Arts and Culture Institutions	985.0	999.2	1,003.4	996.0	957.9	-0.7%
All Sectors	146,439.8	153,916.5	155,975.2	155,832.5	159,154.4	2.1%

Notes: Does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System

Reflecting the differing mandates of the various sectors, the enrolment patterns varied considerably among the sectors. The vast majority of enrolment in CARIs (89%) is in degree programs. Degree programs have always been the bulk of enrolment in CARIs, with the share of degree programs being between 89% and 90% in the past 5 years.

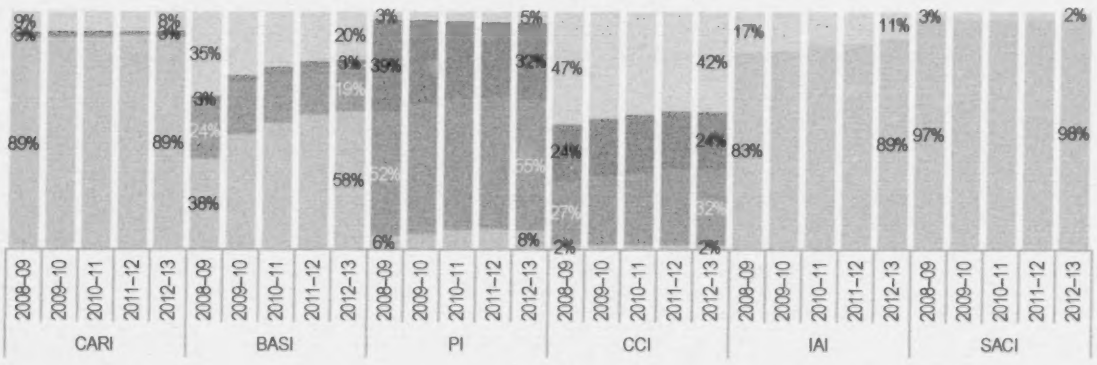
More than half of enrolments in BASIs are in degree programs, and most of the remaining enrolments are in diploma and non-credential programs. The share of these credential types in BASIs have changed substantially over time. The proportion of FLE enrolments in degree programs at BASIs increased from 38% in 2008–09 to 58% in 2012–13; while the proportion of enrolments decreased for diploma programs (from 24% in 2008–09 to 19% in 2012–13) and non-credential programs (from 35% in 2008–09 to 20% in 2012–13). The share of certificate programs in BASIs remained unchanged over these five years.

Enrolments in PIs were mostly in diploma programs (55%) and certificate (primarily journeyperson) programs (32%). The share of certificate programs in PIs has declined (from 39% in 2008–09 to 32% in 2012–13), whereas the shares of other credential types have increased.

Enrolment in CCIs is more dispersed—non-credential programs (42%), diploma programs (32%) and certificate programs (24%). While certificate programs have accounted for about one-quarter of enrolments in each of the past 5 years, the share of diploma programs increased (from 27% in 2008–09 to 32% in 2012–13) and that of non-credential programs decreased (from 47% in 2008–09 to 42% in 2012–13).

Degree programs account for the vast majority of enrolments in IAIs and SACIs. In IAIs, the share of degree programs in the total enrolments increased from 83% in 2008–09 to 89% in 2012–13. Note that IAI's do not collect or submit information on diploma and certificate programs.

Enrolment (FLE) by Credential Type within Sectors, 2012–13



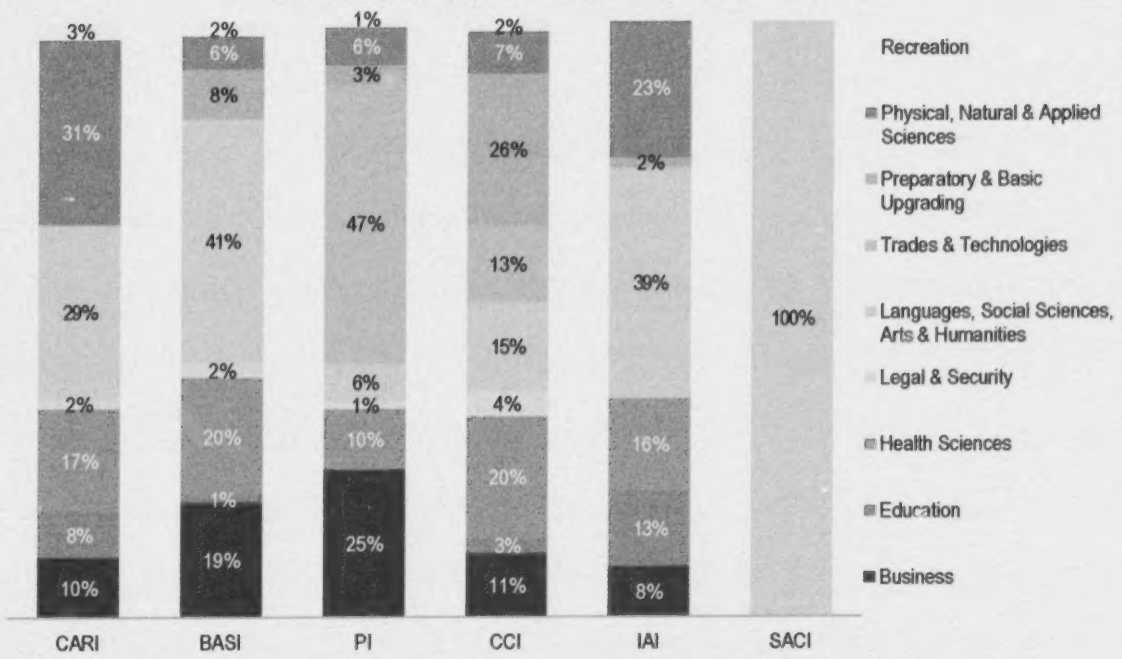
Notes: Does not include dat for the Banff Centre. Values less than 0.5% are not shown on the graph.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System

The program band mix varies greatly between sectors. In CARIs, Physical, Natural & Applied Sciences; Languages, Social Sciences, Arts & Humanities; and Health Sciences are the three most popular program bands—forming more than three-quarters of all enrolments in the sector. The relative size of these program bands in CARIs has remained consistent over the past 5 years.

In BASIs, enrolments are concentrated in Languages, Social Sciences, Arts & Humanities; Health Sciences; and Business program bands. Over the past 5 years, the proportion of enrolments in Languages, Social Sciences, Arts & Humanities decreased from 45% to 41%, while Health Sciences increased from 17% to 20%.

Preparatory & Basic Upgrading is the largest program band in CCIs. However, the share of this program band has decreased from 31% to 26% in the past 5 years. While Languages, Social Sciences, Arts & Humanities remain the largest program band in IAIs, its share has decreased from 44% to 39% over the past 5 years, while other program bands (Physical, Natural & Applied Sciences; Health Science; and Education) have grown. As expected, Trades & Technologies is the largest program band in PIs, although its share has decreased from 52% to 47% in the past 5 years. Enrolments in SACIs are only in the Languages, Social Sciences, Arts & Humanities program band.

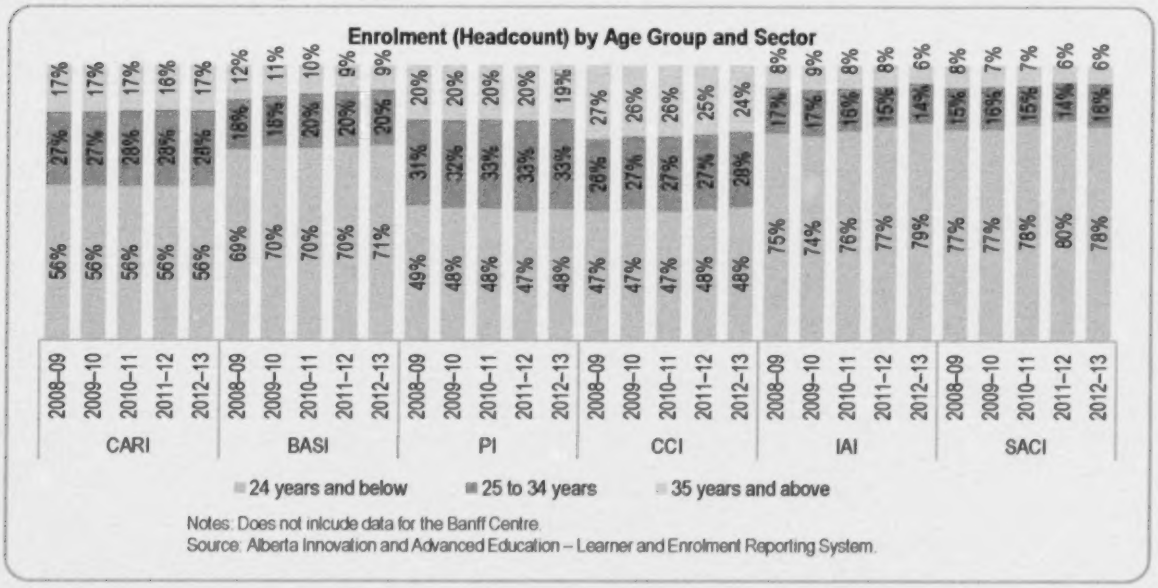
Enrolment (FLE) by Program Bands within Sectors, 2012–13



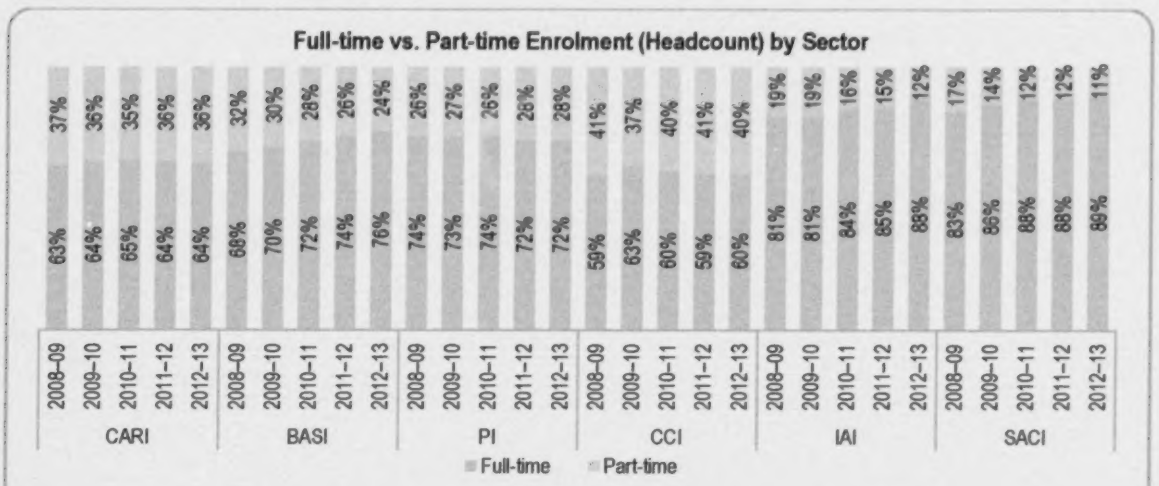
Notes: Does not include data for the Banff Centre. Values less than 0.5% are not shown on the graph.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.

The sectors also showed considerable differences in some of their learner characteristics. More than three-quarters of learners in IAIs and SACIs are learners aged 24 years or below. The share of learners aged 35 years and above is highest in CCIs.

Reflecting their younger age profile, the proportion of full-time learners is highest in IAIs and SACIs, with the proportion of full-time learners showing an increasing trend. The proportion of full-time learners has also increased in the BASI sectors. The proportion of part-time learners is highest in CCIs. This is not surprising considering the higher share of non-credential programs in this sector.

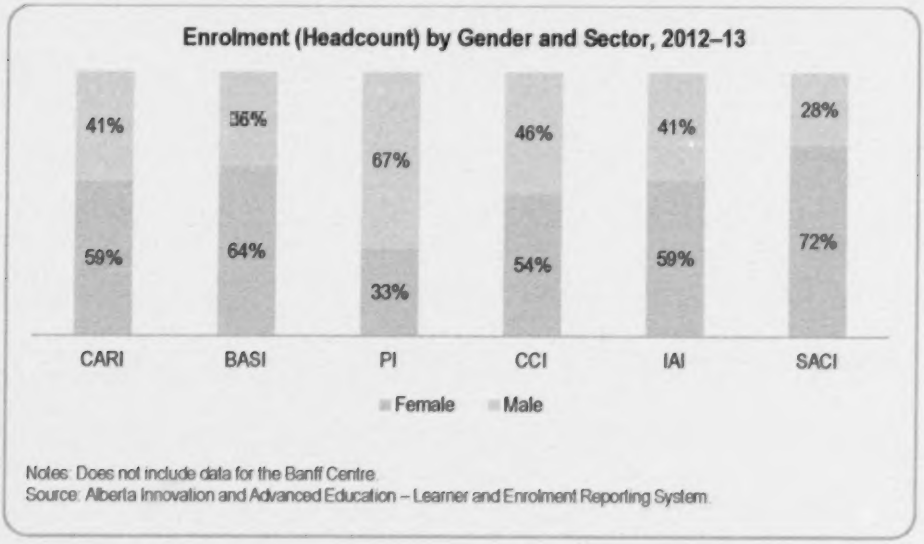


Notes: Does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.



Notes: Does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.

Each sector differs in terms of gender, too. In general, a higher proportion of females than males are enrolled in post-secondary education in Alberta. Among the various sectors, only Polytechnical Institutions have a higher proportion of male students than female students. Gender profiles of sectors have remained consistent over the past 5 years.



Notes: Does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.

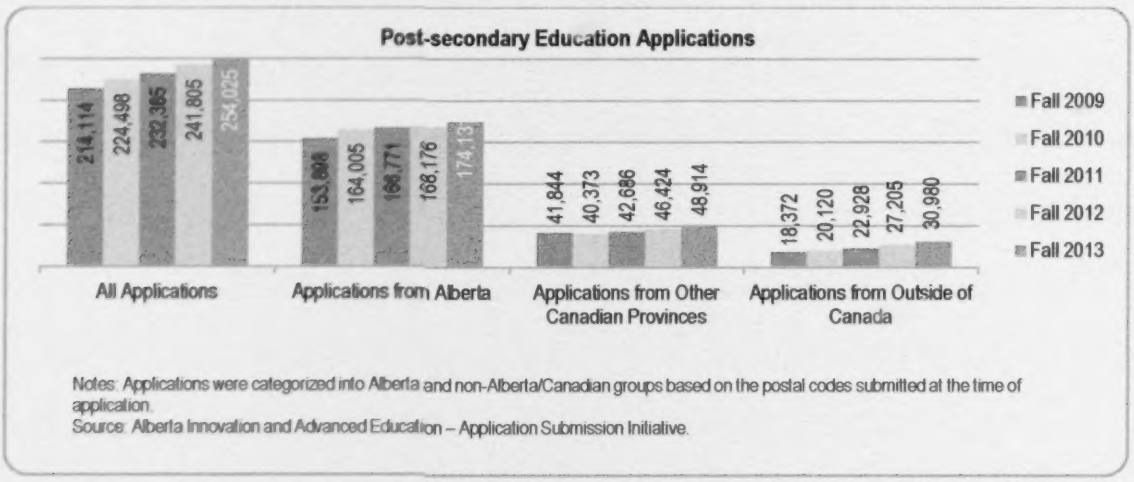
Post-secondary Applications

In the fall of each academic year, IAE collects information from publicly funded post-secondary institutions (not including the Banff Center) on student applications and enrolment information for continuing and returning students. The information is collected through the Application Submission Initiative (ASI) database. Using students' unique Alberta Student Number (ASN) and postal codes on post-secondary application forms, IAE can acquire a general idea of demand and supply* and identify areas that need review at the program, institutional, regional, and system levels, and track student mobility and demographics.

Application Trends

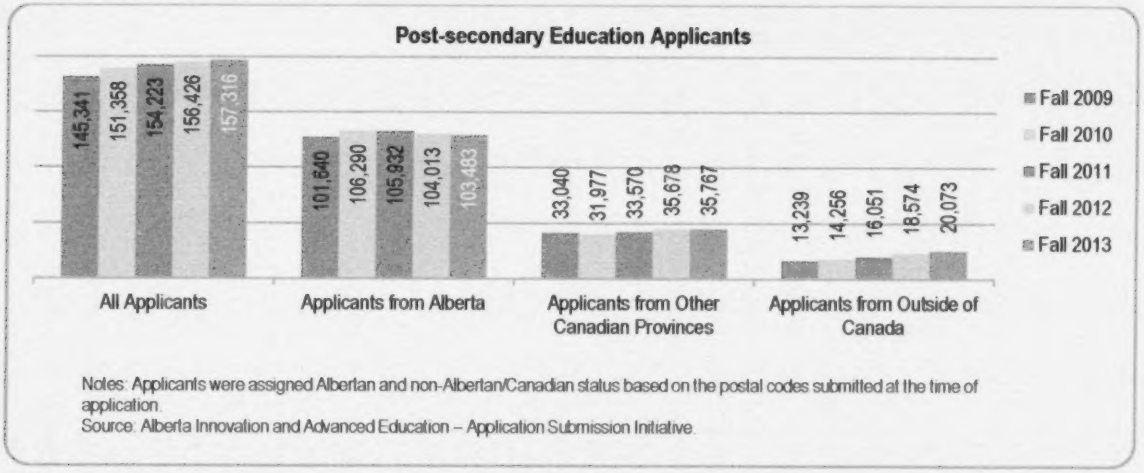
As shown by application data, in fall 2013, 157,316 individuals made a total of 254,025 program applications at publicly funded post-secondary institutions in Alberta, which meant a 0.6% increase (890 more) in the number of applicants and a 5.1% increase (12,220 more) in the number of applications when compared to 2012 data. Of these 157,316 applicants, 65.9% submitted one application to the system and 34.1% submitted multiple applications.

In fall 2013, 174,131 (68.5%) of all the applications came from Alberta, while 79,894 (31.5%) came from areas outside of Alberta, including 48,914 applications from other Canadian provinces and 30,980 applications from outside of Canada. The number of applicants showed similar trends, with 103,483 (65.8%) from Alberta, 35,767 (22.7%) from other provinces within Canada, and 20,073 (12.8%) from outside of Canada. Although the number of applications from Alberta has increased for the past five years, its proportion within the total number of applications has decreased for the past four years. The numbers of applications from other Canadian provinces and from outside of Canada and their proportions within the total number of applications have increased over the past four years.

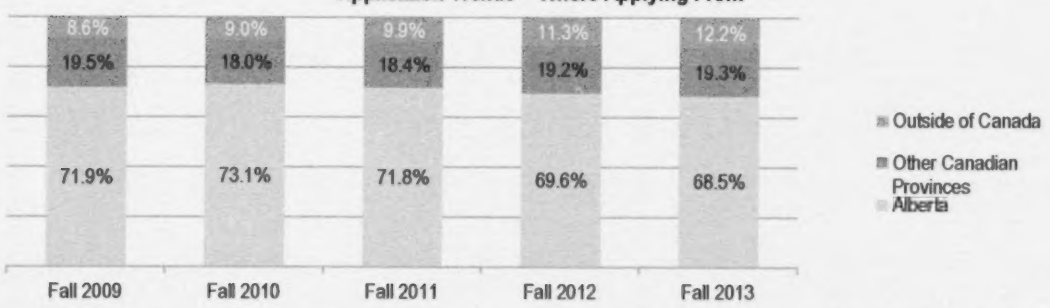


Notes: Applications were categorized into Alberta and non-Alberta/Canadian groups based on the postal codes submitted at the time of application.
Source: Alberta Innovation and Advanced Education – Application Submission Initiative.

* The data collected was based on institutions' own scenarios such as application deadline and admission policies.



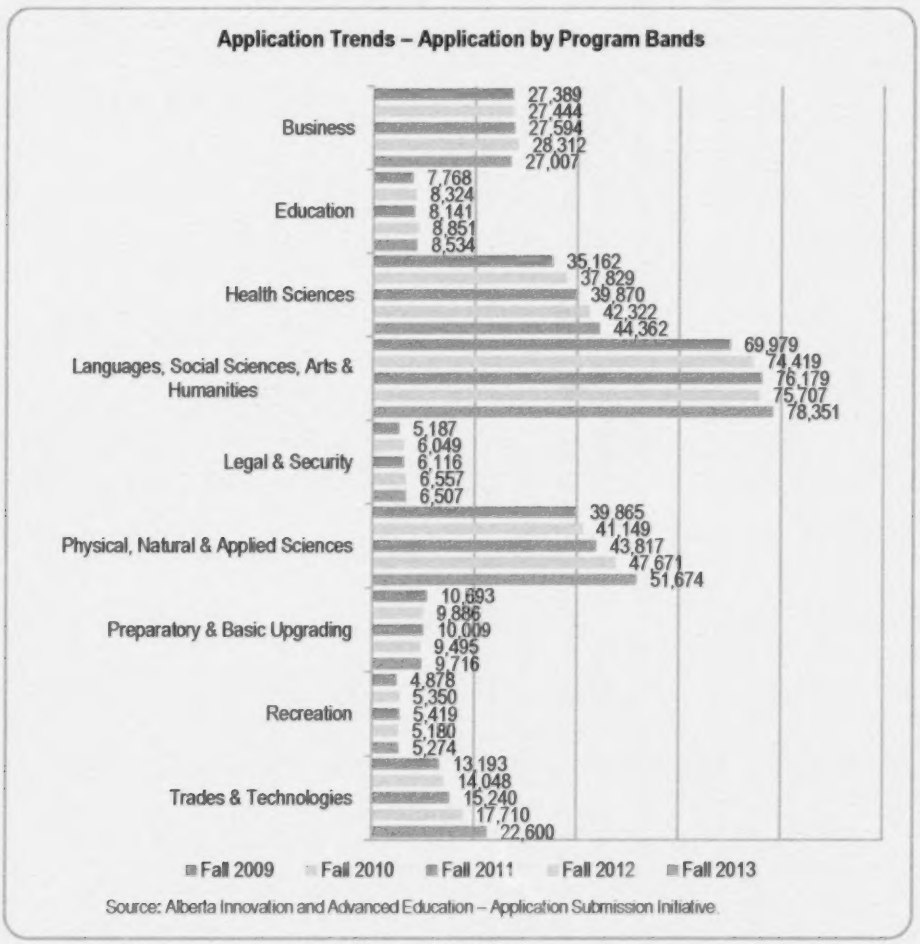
Notes: Applicants were assigned Albertan and non-Albertan/Canadian status based on the postal codes submitted at the time of application.
Source: Alberta Innovation and Advanced Education – Application Submission Initiative.



Notes: Applications were categorized into Alberta and non-Alberta/Canadian groups based on the postal codes submitted at the time of application.
Source: Alberta Innovation and Advanced Education – Application Submission Initiative.

Application trends are affected by economic environment, institutional activities, and student behaviour. Over the last five years, the top three program bands that have attracted the most applications were Languages, Social Sciences, Arts & Humanities; Physical, Natural & Applied Sciences; and Health Sciences.

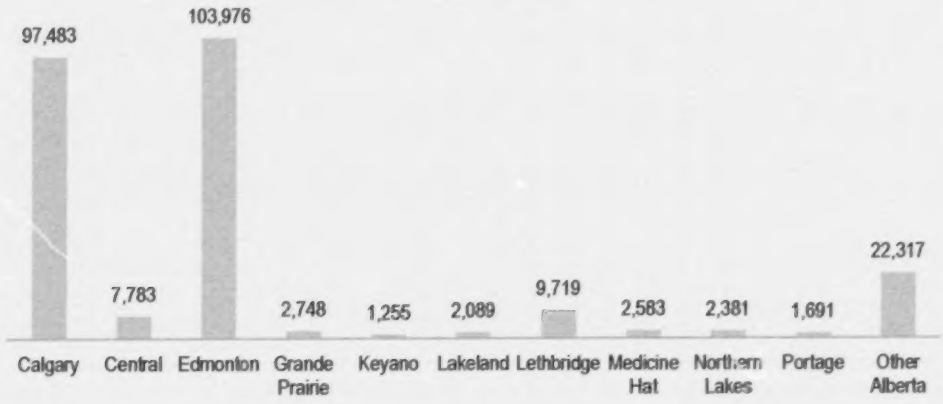
Application trends in program bands could reflect the economic environment and labour market demands of the province. According to IAE's economic data,[78] Alberta has led all provinces in economic growth during the past 20 years. A well-developed economy and advanced industrial requirements among skilled workers might contribute to the growing number of post-secondary applications in relevant fields. In 2013, Physical, Natural & Applied Sciences attracted 20.3% (51,674) of all applications. The 2007 Health Workforce Action Plan anticipated Alberta to face labour shortages in the health-care industry;[79] and health-care occupations were defined as high-demand occupations by the Government of Alberta.[80,81] In fall 2013, Health Sciences attracted 17.5% (44,362) of all applications. In addition, learners may apply to more than one program or more than one institution at a time. The Languages, Social Sciences, Arts & Humanities program band had the highest percentage of applications, and this may due to the fact that learners apply to this program band as an additional option.



Source: Alberta Innovation and Advanced Education – Application Submission Initiative.

Overall, applicants tend to apply to institutions in large urban centres where the most number of institutions are located. In fall 2013, the Edmonton region received the most applications (103,976 or 40.9% of all applications), followed by the Calgary region (97,483 or 38.4% of all applications) and Athabasca University (22,317 or 8.8 % of all applications). This may also due to the presence of CARIs in these locations and the general trend towards urbanization. In fall 2013, CARIs received the majority of applications (136,131 or 53.6% of all applications), followed by PIs (41,599 or 16.4% of all applications) and BASIs (38,899 or 15.3% of all applications).

Application Trends – All Application Destinations, Fall 2013



Notes: Other Alberta refers to Athabasca University.
Source: Alberta Innovation and Advanced Education – Application Submission Initiative.

Learner Demand

Pursuit of knowledge and employability are the primary motivation for the majority of people undertaking post-secondary education[82]. Meeting learners' demands in their educational and career development is an important mission of the advanced learning system. Analysis of learner demand will help to properly inform and align system policy and planning.

Acceptance rates and conversion rates are measures that focus on a snapshot in time, based on applicants for the fall session of an academic year. Learners in different age groups have different levels of participation in post-secondary education. Their choices in various programs and sectors are based on their perceptions and specific needs in career and life planning.

Acceptance Rate and Conversion Rate

Acceptance rate is defined as the proportion of qualified applicants who received an offer of admission to a program from a publicly funded post-secondary institution in Alberta. Conversion rate is defined as the proportion of applicants attending one of Alberta's publicly funded post-secondary institutions, out of the total number of qualified applicants that were offered admission*.

A qualified applicant is someone who has met the minimum academic requirements in at least one program to which he or she applied. Qualification is based solely on meeting the minimum academic requirements as outlined in the institutions' course calendars and does not consider such factors as portfolio assessments or competitive grade point average (GPA) requirements. Individual institutions set criteria for what constitutes qualified students for their programs.

In fall 2013, 126,208 (80.2%) of a total of 157,316 applicants met the minimum qualifications. Of these qualified applicants, 110,766 were offered admission, resulting in an acceptance rate of 87.8%—a 2.2 percentage point decrease from fall 2012 (90.0%, 113,800 offers of admission). Of these 110,766 offered admissions, 72,642 chose to attend the institutions, resulting in a conversion rate of 65.6%—a 1.0 percentage point decrease from fall 2012 (66.6%, 75,797 attendees). It should be noted that qualified applicants may not receive letters of offer for a number of reasons—for example, meeting basic academic requirements is very different from meeting the competitive averages needed to be accepted to many programs, and many programs also have quotas based on admission policies and labour market demands. These students could be attending outside of the institutions reported in ASI (e.g., private institutions, out-of-province/country institutions, academic upgrading outside of post-secondary institutions). Although some of these applicants may have chosen to attend post-secondary education somewhere else, it is likely that some are opting to enter the labour market directly instead.

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* Conversion rate relates to student behavior as the student decides whether or not to attend an institution/program after successful application. In the case where a student was admitted to more than one institution/program, the student would choose only one to attend, which would affect the conversation rate of the other(s).

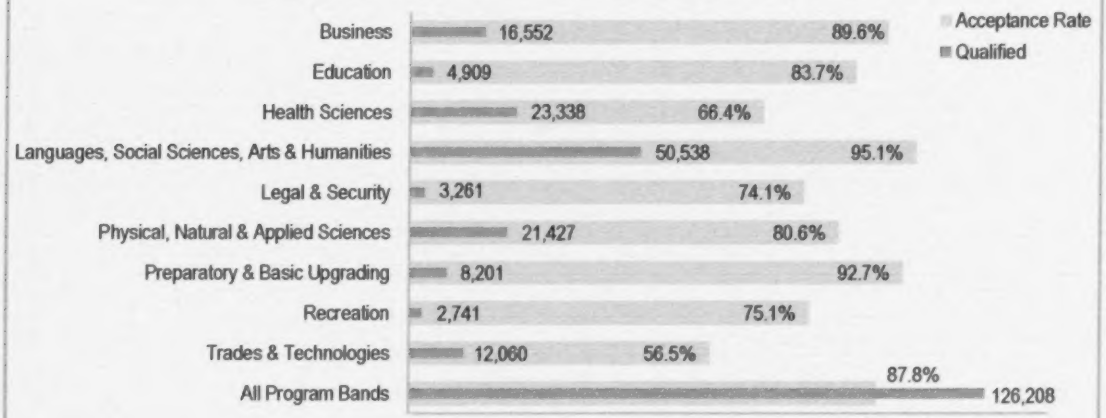
Number of Applicants (All), 2009–2013

Applicants	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Total Applicants	145,341	151,358	154,223	156,426	157,316
	(100%)	(100%)	(100%)	(100%)	(100%)
Total Qualified	116,650	122,879	125,100	126,500	126,208
	(80.3%)	(81.2%)	(81.1%)	(80.9%)	(80.2%)
Qualified and Offered	109,506	113,100	114,337	113,800	110,766
	(75.3%)	(74.7 %)	(74.1%)	(72.8%)	(70.4%)
Qualified, Not Offered	7,144	9,779	10,763	12,700	15,442
	(4.9%)	(6.5%)	(7.0%)	(8.1%)	(9.8%)
Qualified, Offered, and Attending	77,379	77,412	76,316	75,797	72,642
	(53.2%)	(51.1 %)	(49.5%)	(48.5%)	(46.2%)
Qualified, Offered, Not Attending	32,127	35,688	38,021	38,003	38,124
	(22.1%)	(23.6%)	(24.7%)	(24.3%)	(24.2%)
Qualified, Not Offered, Not Attending	5,778	8,159	8,971	10,466	12,958
	(4.0%)	(5.4%)	(5.8%)	(6.7%)	(8.2%)
Acceptance Rate	109,506/116,650	113,100/122,879	114,337/125,100	113,800/126,500	110,766/126,208
	(93.9%)	(92.0%)	(91.4%)	(90.0%)	(87.8%)
Conversion Rate	77,379/109,506	77,412 /113,100	76,316/114,337	75,797/113,800	72,642/110,766
	(70.7%)	(68.4 %)	(66.7%)	(66.6%)	(65.6%)

Source: Alberta Innovation and Advanced Education – Application Submission Initiative.

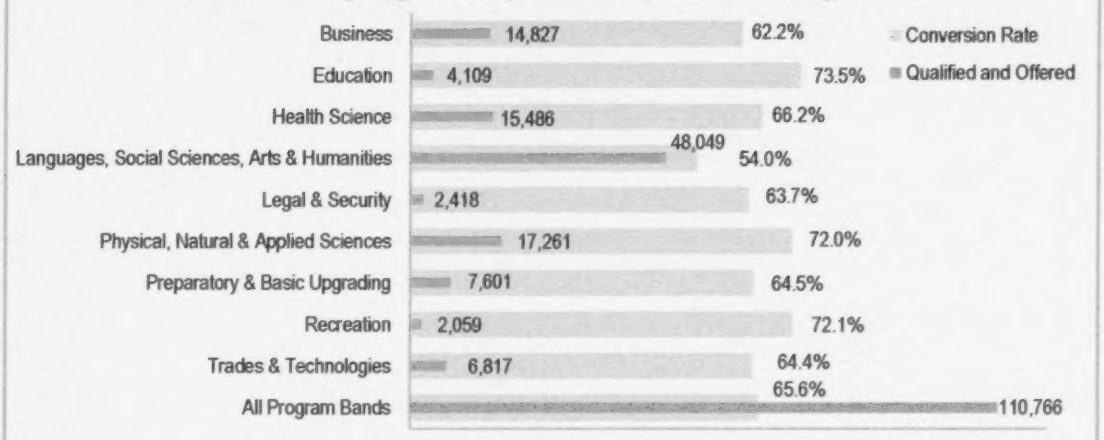
When looking at acceptance rates and conversion rates at the program band level, the acceptance rates varied considerably across program bands. In fall 2013, the program band Languages, Social Sciences, Arts & Humanities had the highest acceptance rate of 95.1%, followed by Preparatory & Basic Upgrading (92.7%); Business (89.6%); Education (83.7%); and Physical, Natural & Applied Sciences (80.6%). Conversion rates for most program bands varied between 62.2% and 73.5%. The one program band outside this range was Languages, Social Sciences, Arts & Humanities, which had the lowest conversion rate (54.0%), and at the same time, the highest acceptance rate and the largest number of attendees. Summary tables with data related to number of applicants/applications, acceptance rates, and conversion rates for each of the various sectors are provided in Appendix B.

Acceptance Rate by Program Band (Qualified to Offered), Fall 2013



Source: Alberta Innovation and Advanced Education – Application Submission Initiative.

Conversion Rate by Program Band (Qualified and Offered to Attending), Fall 2013

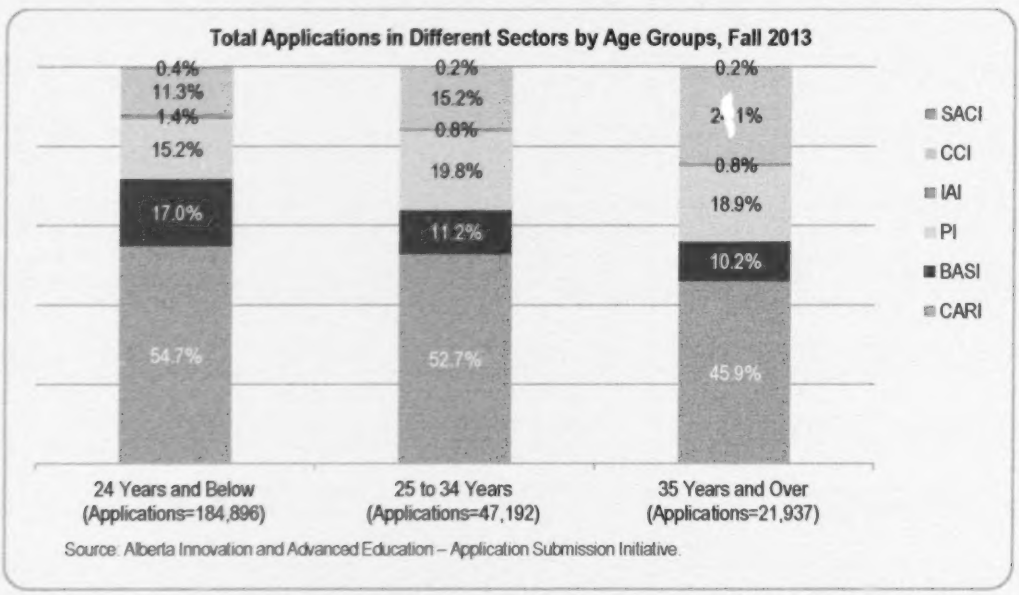


Source: Alberta Innovation and Advanced Education – Application Submission Initiative.

Learner Demand by Age Groups

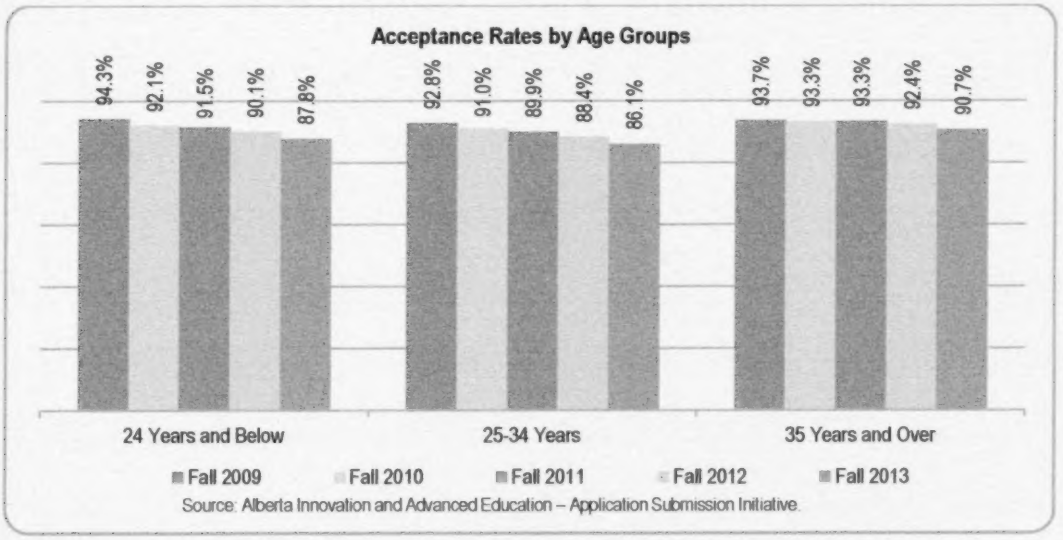
IAE has the goal of ensuring that Albertans are engaged in lifelong learning, with specific priority initiatives to enhance pathways to ease the movement of learners into the advanced learning system. IAE is committed to assisting learners in achieving their goals in knowledge and employability enhancement, and contributing to the development of a knowledge-driven future. Therefore, greater access for adult learners to post-secondary learning and lifelong learning opportunities is seen as one of the successes of the post-secondary education system. Reviewing post-secondary applications by age groups provides insights on learners' specific demands in their lives. With these insights, government and institutional partners can develop more appropriate programs, delivery strategies, and management approaches that meet learner demands.

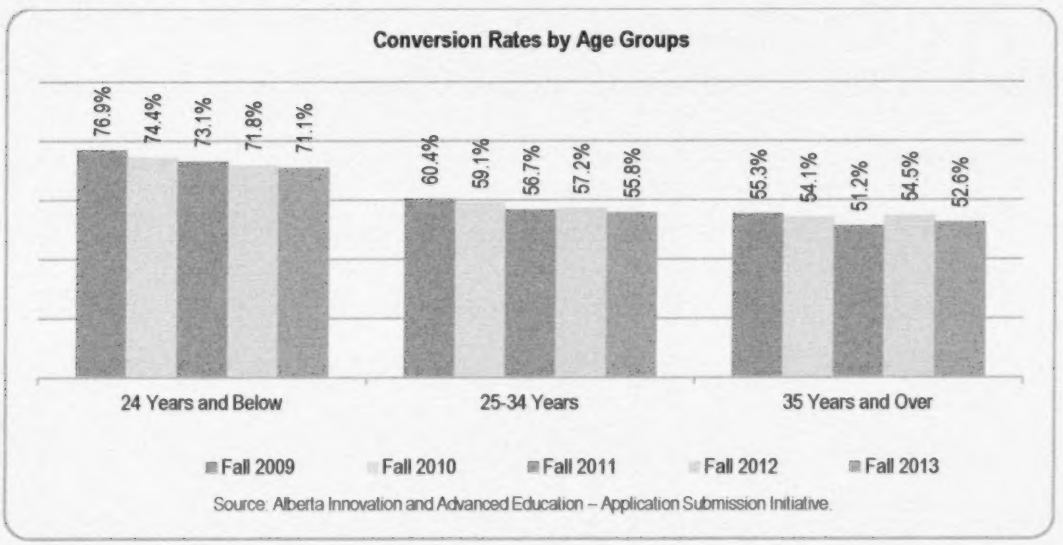
Applications were categorized into three age groups: under 24 years old, 25–34 years old and 35+ years old. In fall 2013, all three age groups were highly interested in CARIs, with around 50% of applications from each age group applying to institutions of this sector. Applications from each age group showed different levels of interest in other sectors. BASIs had 17.0% of applications from the under 24 group, 11.2% from the 25–34 group, and 10.2% from the 35+ group; the IAIs had the proportions of 1.4%, 0.8%, and 0.8% respectively; and the SACIs had the proportions of 0.4%, 0.2%, and 0.2% respectively. Conversely, the CCIs, (11.3%, 15.2%, and 24.1%, respectively) and PIs (15.2%, 19.8%, and 18.9%) showed different proportions of age distributions. These numbers give a general picture* of how learners' demands change with age.



* The number of applications received in each sector could be affected by different institutions' admission policies.

Reviewing acceptance rates by age groups in the last five years indicates that acceptance rates have declined continuously for the under 24 group and the 25–34 group. The acceptance rate also declined for the 35+ group, but less prominently. Overall, the 35+ group had a much steadier and above-average acceptance rate as compared to the other two age groups. However, the 35+ group had the lowest conversion rate. A similar phenomenon happened in the 25–34 group. Possible explanations for low conversion rates in those two age groups could be higher opportunity costs of attending post-secondary institutions for older individuals in terms of employment choice or other life decisions, institutions' program delivery flexibility and learners study flexibility.





Enrolment Projections

In collaboration with Alberta Education, Alberta Treasury Board and Finance, and Alberta Health, IAE has created In-jector,[83] an enrolment forecasting model. In-jector is a powerful tool with population and enrolment data and a sound forecasting methodology that can be used to give a general picture of future student populations. The primary functions of In-jector are:

- Project post-secondary enrolments at both the institutional and provincial levels, and
- Break out expected enrolments into program band distinctions.

This forecasting model serves as a springboard for thoughtful, strategic conversations about future enrolment growth or decline in post-secondary institutions; it allows post-secondary planners and administrators to engage in informed conversations about future enrolment trends at both the institutional and provincial levels, as well as estimate their potential impact on budgets, staffing, programs, and facilities.

In-jector uses projected population and historical enrolment to determine input variables for calculating future enrolment (expressed as FLEs). The population data is based on Alberta Treasury Board and Finance's projection; historical enrolment data is derived from information that publicly funded post-secondary institutions submit to IAE's Learner and Enrolment Reporting System. When all of the data is entered, In-jector can create projection scenarios based on three input variables used in the model:

- Uptake Levels: used to determine the number of new enrolments at an institution each year. Uptake levels are based on the number of entrants to an institution from the K–12 system over 10 years (assuming that all of the institution's enrolments come from the underlying service area—for CARIs, this is Alberta; for all other institutions, it is their service region).
- Retention Levels: the percentage of the previous academic years' FLEs that remain in the current academic year.
- Program Proportions: the percentage of institutions' gender-based enrolments in each program band.

Specifically, In-jector uses cohorts of 17-year-old high school students aged according to the year being forecasted to predict new enrolments. It uses the previous years' enrolments and applies age-specific retention rates to predict retained enrolments*. Total enrolments are then broken into various program bands using institution-specific proportions.

While formula-driven, the model can take into account data anomalies, such as sudden drops or increases in enrolment. The table below outlines enrolment growth projections by service region, based on roll-ups of institution-level figures. Enrolment growth is expected to vary among institutions. The projected peak enrolment growth is the sum of all enrolment increases over the forecast period.

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* New enrolments are defined as FLEs from students who were not at that institution in the previous year. Retained enrolments are defined as FLEs from students who were at that institution in the previous year.

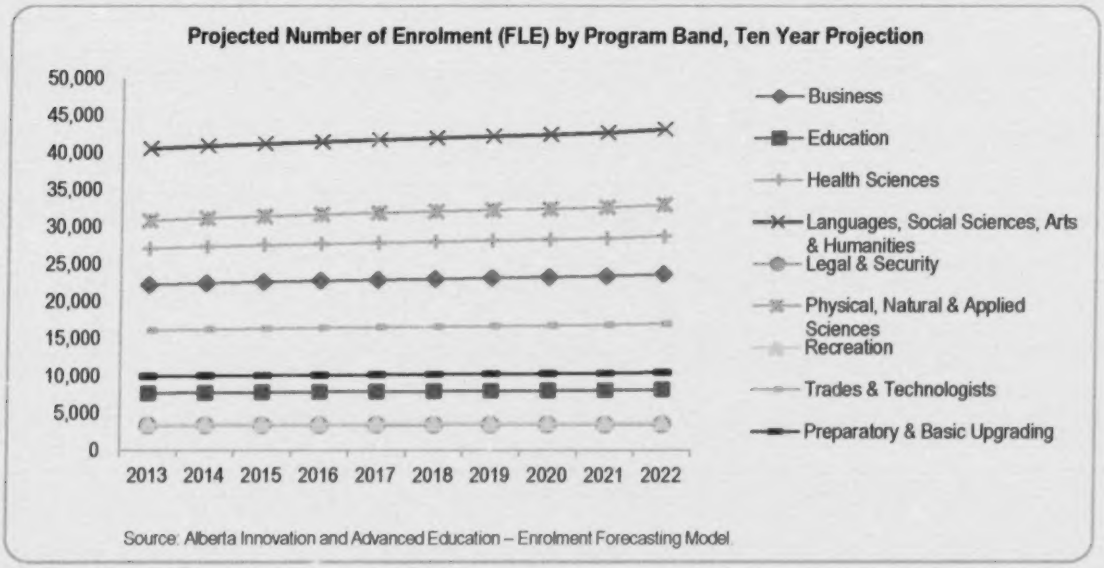
Enrolment growth is expected to vary across the system during the 2012-13 to 2022-23 projection period. Most institutions show an increasing trend in enrolment and will reach their respective peak enrolment at the end of the projection period (e.g., the last two years). However, some institutions show a declining trend in enrolment over the projection period and result in a "nil" regional peak enrolment growth (details in the following projection table). For a few institutions, enrolment growth is not expected to follow a linear growth path; these institutions will see enrolment increases in some years and decreases in others. Over the projection period, urban areas of the province are anticipated to have the highest projected peak growth, with 7,145 FLEs (57.3% of total growth) in the Calgary region and 3,915 FLEs (31.4% of total growth) in the Edmonton region.

Projected Enrolment Growth (FLE) by Service Region, 10-Year Projection

Geographic service region	Projected peak enrolment growth 2012-13 to 2022-23	% of total
Calgary	7,145	57.3%
Edmonton	3,915	31.4%
Central	175	1.4%
Lethbridge	465	3.7%
Medicine Hat	90	0.7%
Grande Prairie	10	0.1%
Keyano	165	1.3%
Lakeland	-	0.0%
Northern Lakes	115	0.9%
Portage	-	0.0%
Athabasca	400	3.2%
Total	12,480	100.0%

Notes: All figures are in FLEs. This does not include the Banff Centre. Peak enrolment is the maximum expected enrolment growth over the period. The peak figure does not take into account enrolment decreases; annual enrolment increases are summed to derive a peak increase.
Source: Alberta Innovation and Advanced Education – Enrolment Forecasting Model.

All program bands have a general tendency of increasing enrolment over the ten-year projection period. All program bands will reach their respective peak enrolments in fall 2022. Based on population projection and historical enrolment data, Languages, Social Sciences, Arts & Humanities will continue to have the most number of FLEs in the next ten years (43,104 FLEs in fall 2022), followed by Physical, Natural & Applied Sciences (32,961 FLEs in fall 2022) and Health Sciences (28,765 FLEs in fall 2022). Program bands Recreation (3,694 FLEs in fall 2022) and Legal & Security (3,478 FLEs in fall 2022) share a similar trend, having the fewest number of enrolments over the projection period.



Source: Alberta Innovation and Advanced Education – Enrolment Forecasting Model.

System Capacity and Space Utilization

Assessing institutions' capacity to accommodate learners is critical to identifying space pressures from projected enrolment growth in the post-secondary system. It also supports the effective use of existing resources by helping align demand and capacity. Assessing system capacity includes estimates of existing institutional capacity and estimates of the capacity resulting from projects that are approved or under way but not yet completed.

Estimates of existing institutional capacity are based on enrolment data, which indicates the level of enrolment an institution has historically been able to accommodate. Estimates of capacity that will be provided by capital projects that are approved or under way are conducted using information from institutions' capital project descriptions. Institutions submit business cases and project descriptions through Alberta Infrastructure's Building and Land Information Management System. The estimated increase in capacity is updated by the institution as its project develops. The estimated capacity increase resulting from institutions' approved capital project(s) is one of the factors used when assessing the need for the project, prioritizing it in the capital-planning process, and gaining approval through the provincial capital plan.

Over the 2012-13 to 2022-23 projection period, Campus Alberta is well positioned to meet anticipated demand for post-secondary education at the system level. Over the projection period, a capacity surplus of 7,280 FLEs is anticipated at the system level. As shown in the next table, there are 11,832 FLEs coming from approved expansion/under construction. This improved capacity will significantly help accommodate enrolment increases in response to both learner and labour market demands. Capacity expansions might also address facilities that have been overused due to high demand in specific program areas.

Over the projection period, capacity levels vary across regions and institutions, with some institutions in the high-demand regions showing a shortage to meet projected demand. The largest regional capacity shortage comes from the Calgary region with a shortage of 2,546 FLEs. The reasons for capacity shortages could be increased learner demand or insufficient/limited new capital projects development.

Capacity and Forecasted Enrolment by Institution and Service Region

Institution	2012-13 existing capacity	Approved expansion / under construction	2024-25 projected capacity	Projected enrolment (FLE) range 2012-13 to 2022-23* Low	High	Surplus/ (shortage of projected capacity) to meet High
Alberta College of Art and Design	960	–	960	958	1,054	(94)
Ambrose University College	700	–	700	449	528	172
Banff Centre**	550	–	550	n/a	550	0
Bow Valley College	6,777	–	6,777	5,124	5,630	1,147
Mount Royal University	10,165	1,835	12,000	9,837	11,171	829
Southern Alberta Institute of Technology	14,600	–	14,600	12,494	14,581	19
St. Mary's University College	500	–	500	437	512	(12)
University of Calgary	25,335	1,350	26,685	28,341	31,292	(4,607)
Total Calgary region	**59,587**	**3,185**	**62,772**	**57,640**	**65,318**	**(2,546)**
Canadian University College	500	–	500	515	622	(122)
Olds College	1,545	–	1,545	1,269	1,294	251
Red Deer College	5,450	–	5,450	3,488	3,553	1,897
Total Central region	**7,495**	**0**	**7,495**	**5,272**	**5,469**	**2,026**
Concordia University College of Alberta	1,800	–	1,800	1,187	1,209	591
Grant MacEwan University	12,100	1,000	13,100	11,838	12,322	778
King's University College	880	–	880	542	555	325
Northern Alberta Institute of Technology	12,275	1,700	13,975	13,246	13,740	235
NorQuest College	4,400	2,000	6,400	3,884	3,963	2,437
University of Alberta	36,930	1,732	38,662	36,299	39,127	(465)
Total Edmonton region	**68,385**	**6,432**	**74,817**	**66,996**	**70,916**	**3,901**
Grande Prairie Regional College	2,770	500	3,270	1,921	1,960	1,310
Total Grande Prairie region	**2,770**	**500**	**3,270**	**1,921**	**1,960**	**1,310**
Keyano College	2,095	–	2,095	1,344	1,508	587
Total Keyano region	**2,095**	**–**	**2,095**	**1,344**	**1,508**	**587**
Lakeland College	2,225	50	2,275	1,976	2,303	(28)
Total Lakeland region	**2,225**	**50**	**2,275**	**1,976**	**2,303**	**(28)**
Lethbridge College	4,000	900	4,900	3,934	4,037	863
University of Lethbridge	7,370	450	7,820	6,772	7,131	689
Total Lethbridge region	**11,370**	**1,350**	**12,720**	**10,706**	**11,168**	**1,552**
Medicine Hat College	2,650	200	2,850	2,397	2,511	339
Total Medicine Hat region	**2,650**	**200**	**2,850**	**2,397**	**2,511**	**339**
Northern Lakes College	1,250	75	1,325	1,250	1,364	(39)
Total Northern Lakes region	**1,250**	**75**	**1,325**	**1,250**	**1,364**	**(39)**
Portage College	1,260	40	1,300	923	958	342
Total Portage region	**1,260**	**40**	**1,300**	**923**	**958**	**342**
Athabasca University	8,500	–	8,500	8,268	8,664	(164)
SYSTEM TOTAL	**167,587**	**11,832**	**179,419**	**158,693**	**172,139**	**7,280**

Notes: All figures are in FLEs. Projected capacity includes existing capacity, recently completed facilities, and approved projects underway.
*The projected enrolment range represents the lowest and highest levels of enrolment within the region over the projection period, and does not necessarily equate to 2012-13 and 2022-23 enrolment levels.
**Forecast data are not available for the Banff Centre. Its existing capacity is used as a proxy for its peak enrolment growth.
Sources: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System (LERS), Post-secondary Planning and Investments Branch, Enrolment Forecasting Model.

Learner Pathways

Ensuring that students can easily move into and through the advanced learning system is an important part of an accessible system. Mechanisms that facilitate opportunities for diverse learner pathways and system mobility help students move into and between institutions, programs, or credentials; reduce barriers to educational achievement; and get students into the labour market faster. The Alberta Transfer System and its member institutions support these opportunities.

Alberta Council on Admissions and Transfer

The Alberta Council on Admissions and Transfer (ACAT) is the provincial advisory body responsible for providing oversight and advice regarding learner pathways and mobility and the Alberta Transfer System. ACAT's role includes providing planning tools and information; fostering best practices regarding admissions and transfer; and facilitating smooth course/program transitions from secondary to post-secondary, amongst and out of post-secondary. Learner pathways include the following routes for students to move into, within, and out of post-secondary—by-program and by-course institution transfer agreements, collaborative programs, dual credit*, bridging programs, university transfer, high school upgrading, Prior Learning Assessment and Recognition (PLAR), International Baccalaureate, and Advanced Placement.

Recognizing Prior Learning

Recognition of prior learning uses three types of assessment processes to evaluate acquired knowledge, skills, and attitudes. These processes are transfer credit, credential recognition, and Prior Learning Assessment and Recognition (PLAR).

Transfer is the movement of students among post-secondary institutions based on transferable credit. The Alberta Transfer System is currently comprised of 39 post-secondary institutions working collaboratively to support student mobility and learner pathways, including recognition of prior learning. Members include 26 publicly funded, 4 out-of-province, 5 Indigenous, and 4 private institutions. Membership in the transfer system is open to public and private not-for-profit institutions. Currently, there are more than 77,000 transfer agreements made available to students by Alberta Transfer System member institutions via Transfer Alberta. This includes over 32,000 by-course and 900 by-program active transfer agreements and over 44,000 Grandfathered/Terminated agreements. In 2008–09, there were over 73,000 transfer agreements.

* Dual credit involves high school students participating in apprenticeship training, and/or post-secondary college or university courses, earning both high school and post-secondary credit, including opportunities for preferred placement (post-secondary course exemption) and workplace certification. More information on GOA's Provincial Dual Credit Strategy (2013–16) is available at http://education.alberta.ca/department/ipr/dualcredit.aspx

Transfer credit is awarded for successful completion of structured educational activities at a post-secondary institution. Based on successful completion of studies, students receive transfer credit, where appropriate, upon admission to an educational program in a post-secondary institution. According to the Alberta Graduate Outcomes Survey, Class of 2009–10, the vast majority of Alberta's post-secondary graduates (90%) were satisfied with the transfer credit they received when transitioning from one institution to another.[84]

Alberta's International Qualifications Assessment Service (IQAS)[85] compares educational qualifications obtained in other countries to those in Alberta in order to help people with employment, professional licensure, or further education. Biennially, IQAS measures client satisfaction and resulting educational and labour market outcomes from the credential assessment process. Data from this survey demonstrates that about 66% of IQAS clients seek an assessment primarily to pursue further education, 55% for employment, and 30% to obtain professional licensure. About 49% of IQAS clients reported applying for further education because a Canadian credential was more useful in finding a job or because their current qualifications were not recognized in Canada (22%). The top challenges cited by IQAS clients in either finding employment or pursuing further education were not having their work experience in their home country recognized (65%), not having the education received in their home country recognized (62%), financial barriers (58%), and being unable to meet professional licensing requirements (52%).[86]

Prior Learning Assessment and Recognition (PLAR) is the process of post-secondary institutions/organizations assessing and recognizing students' knowledge and skills acquired through non-formal and informal learning in relation to a certain goal, such as receiving credit in a post-secondary program, meeting professional licensure/certification requirements, or obtaining employment. Between 2009/10 and 2012/13, a total of 20 institutions have reported enrolments related to PLAR credits awarded to students in Alberta.[87] In support of PLAR, an ACAT Articulation Committee comprised of interested institution representatives is in the process of being initiated in 2014-15. Alberta is also currently participating on a Recognition of Prior Learning (RPL) Strategic Advisory Panel in support of the Canadian Association for Prior Learning Assessment's (CAPLA's) Pan-Canadian RPL Quality Assurance Project. A PLAR assessment may include one or more of the following: challenge exams, oral exams or interviews, performance assessments, product assessments, and portfolio assessments. Results from the Alberta Graduate Outcomes Survey, Class of 2009–10 showed that 33% of graduates who completed PLAR wrote a challenge exam, 23% completed a skills demonstration or assessment and 22% completed a portfolio assessment. Nearly three-quarters (77%) of graduates who applied for PLAR were successful in being awarded PLAR credits.[88]

Transition from High School

Improving transition rates between high school and post-secondary education will increase educational attainment levels and contribute to quality-of-life improvements at the individual, family, and societal levels. As part of Alberta Innovation and Advanced Education's annual survey of high school students, students were asked if they plan to pursue post-secondary education or training after they complete high school. The vast majority (83%) of high school students indicated that they plan to pursue education or training after high school, with the majority (78%) saying they are planning to do so in Alberta.[89]

While the vast majority of high-school students plan to pursue higher studies, in 2012–13, only 40% of Alberta high school students transitioned to post-secondary directly after high school (within four years of entering Grade 10). In the same reporting year, 59.2% of Alberta high school students transitioned to post-secondary within six years of entering Grade 10. The 4-year transition rate has increased over the past 5 years. While this increase has been small, it has been steady; indicating that there might be a trend towards more immediate transition to post-secondary education after high school. The 6-year transition rate has remained stable over time. The transition rates at the regional level varied from 41.0% in Northern Lakes region to 63.8% in the Lakeland region.

High School Transition Rate by Service Region

Geographic service region	Four-year					Six-year				
	2008–09	2009–10	2010–11	2011–12	2012–13	2008–09	2009–10	2010–11	2011–12	2012–13
Calgary	39.7%	40.8%	40.9%	42.5%	42.9%	62.6%	61.9%	61.1%	62.1%	61.9%
Central	33.3%	33.4%	34.1%	38.4%	38.5%	54.3%	55.4%	55.2%	56.8%	55.2%
Edmonton	37.9%	37.7%	38.3%	38.6%	38.7%	61.1%	60.6%	59.3%	60.1%	60.3%
Grande Prairie	30.9%	32.7%	34.1%	36.0%	34.5%	52.9%	51.1%	49.4%	51.3%	52.6%
Keyano	30.1%	29.9%	34.6%	36.2%	38.2%	57.3%	53.5%	50.2%	54.5%	53.5%
Lakeland	43.2%	41.5%	46.4%	46.9%	48.9%	65.7%	63.9%	65.6%	64.7%	63.8%
Lethbridge	38.6%	41.2%	39.0%	40.5%	41.2%	59.3%	61.0%	58.8%	61.2%	58.8%
Medicine Hat	41.9%	38.6%	39.7%	39.6%	37.5%	63.5%	60.1%	60.5%	58.4%	60.4%
Northern Lakes	26.6%	28.9%	25.0%	24.7%	29.5%	47.9%	44.7%	44.4%	46.1%	41.0%
Portage	38.3%	33.4%	35.8%	40.1%	40.8%	57.4%	58.6%	57.2%	56.8%	57.4%
Alberta	37.5%	37.8%	38.2%	39.6%	40.0%	59.8%	59.3%	58.4%	59.5%	59.2%

Notes: Results include all public, separate, charter, francophone, and private schools in Alberta with a high school program.
Source: Alberta Education

As part of Alberta Innovation and Advanced Education's survey of high school students, those who plan to pursue education or training were asked to rate the various sources that influenced their decision to pursue education or training. The five highest rated sources were parents and family (92%), information from post-secondary institution websites (81%), friends and other students (79%), *Careers: The Next Generation* (79%), and teachers or counsellors (78%). Some students also mentioned Government of Alberta's resources such as Learning Clicks (69%), ALIS website (56%), Student Aid Alberta website (46%) and TradeSecrets website (35%) as influencing their decisions.

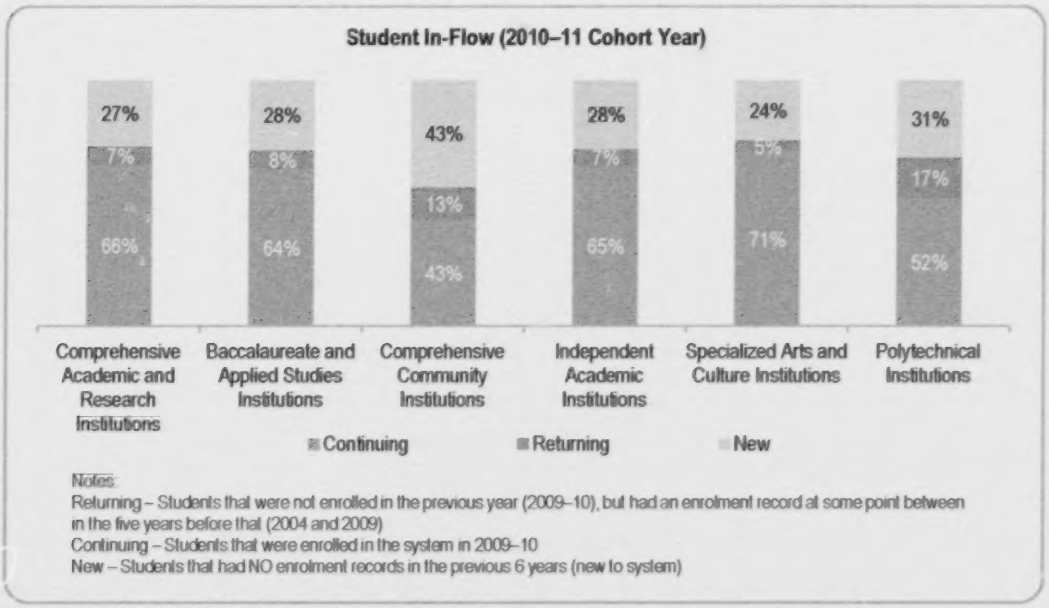
Student Enrolment Flow

In 2010–11, over 266,000 students were enrolled in the 26 publicly funded post-secondary institutions in Alberta. In the following year (2011–12), approximately 154,500 (just under 60%) of these students continued in the system, with approximately 17,000 of those students demonstrating system mobility by continuing at a new institution.[90]

IAE and ACAT produces student mobility reports to provide public post-secondary institutions and Alberta's six sectors in Campus Alberta information regarding student flows and tracking. These reports use student enrolment data collected from and approved by institutions as the input. These reports replace the previous ACAT Transfer Patterns reports (last published in 2011), and will be updated on a yearly basis.

To analyze student in-flow, students enrolled in the post-secondary system in a given year are classified into three groups—new students, continuing students and returning students—based on their prior interaction with the post-secondary system. Students who had no enrolment records in Alberta's post-secondary system for the previous 6 years in are classified as new students. Students that were enrolled in the system in the prior year are classified as continuing students. Students that were not enrolled in the previous year, but had an enrolment record at some point in the five years before that are classified as returning students.

CARI, BASI, IAI and SACI sectors had similar student in-flow profiles for the 2010–11 cohort year, with close to two-thirds of their students being continuing students and about one-quarter being new students. Less than one-in-ten students were returning students. CCI and PI sectors had higher proportions of new and returning students compared to the other sectors. This is not surprising given the large share of shorter program types such as certificate, diploma and non-credential programs in CCI and PI sectors. In all the sectors, most (~90%) continuing students were enrolled in the same sector the previous year. A lower proportion (41% to 79%) of returning students enrolled in the same sector when they returned to post-secondary system.

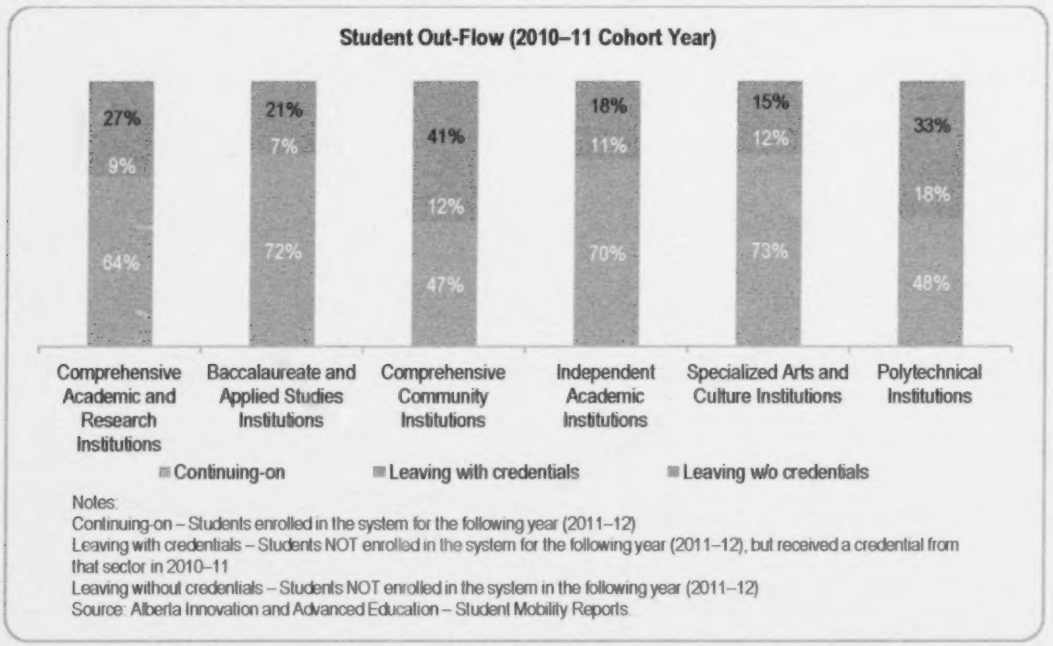


Notes:
Returning – Students that were not enrolled in the previous year (2009–10), but had an enrolment record at some point between in the five years before that (2004 and 2009)
Continuing – Students that were enrolled in the system in 2009–10
New – Students that had NO enrolment records in the previous 6 years (new to system)

To analyse student out-flow, students are classified into two main groups—continuing-on and leaving. *Continuing-on* students are those who are enrolled in the system for the following year, and *leaving* students are those who are not enrolled in the system the following year. *Leaving* students are further divided into those who received a credential and those that did not receive a credential in the cohort year.

BASI, IAI and SACI sectors had similar student out-flow profiles for the 2010–11 cohort year, with more than two-thirds of their students continuing on. In the CARI sector, the majority (64%) of students are continuing on in the post-secondary system, although 27% of CARI sector students are leaving the system without a credential. Note that this analysis is for a window of one year only and includes students who are enrolled in distance education. Some of the students who leave the system without credentials might be returning to the system at a later time. Program completion rates are discussed later in this report.

More than half of students enrolled in CCI and PI sectors in 2010–11 were not enrolled in post-secondary studies the following year. One factor that might help explain this is students in shorter program types such as certificate, diploma and non-credential programs forming a majority of enrolments in these two sectors. In all the sectors, most students who continue on in the system were enrolled in the same sector the previous year (~85% to 95%).



Notes:
Continuing-on – Students enrolled in the system for the following year (2011–12)
Leaving with credentials – Students NOT enrolled in the system for the following year (2011–12), but received a credential from that sector in 2010–11
Leaving without credentials – Students NOT enrolled in the system in the following year (2011–12)
Source: Alberta Innovation and Advanced Education – Student Mobility Reports

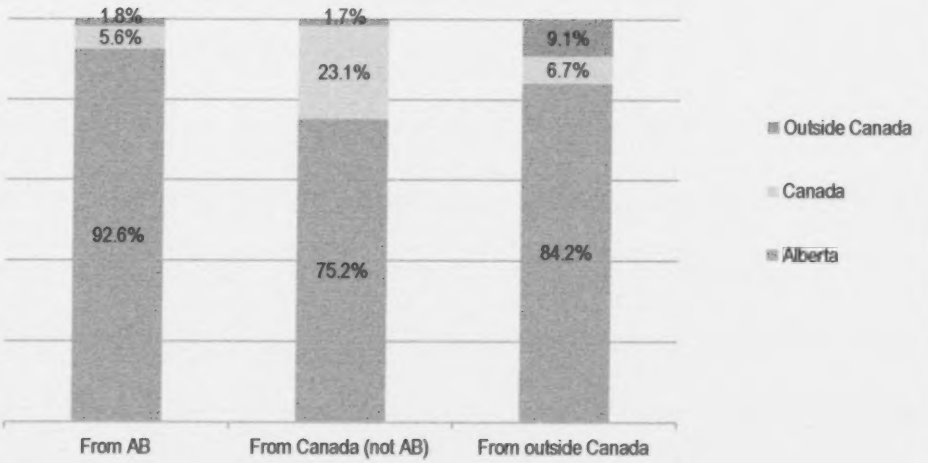
The Alberta Council on Admissions and Transfer publishes detailed Student Mobility Reports for each institution and sector on its website http://www.acat.gov.ab.ca/new_format_include/research/. Additional types of mobility reports and additional analysis of student pathways are also planned.

Post-graduation Mobility

The Alberta Graduate Outcomes Survey[91] asks graduates of Alberta's post-secondary institutions where they were living when they applied to post-secondary and whether they have permanently relocated to a different community since graduating. If graduates answered "yes," they were then asked to indicate where they had relocated. Student locations were then combined to determine student residence after graduation.

According to the survey of the class of 2009–10, the majority of Alberta's post-secondary graduates (89.9%) chose to remain in Alberta following graduation, 7.8% indicated a place of residence elsewhere in Canada and a small proportion (2.3%) were living outside the country. Graduates from Alberta (92.6%) and graduates who applied from outside Canada (84.2%) were more likely to have stayed in Alberta after graduation than students from other parts of Canada (75.2%). These results are similar to those from the Graduate Outcomes Survey, Class of 2007–08.[92] It should be noted that since the survey is conducted 2 years after graduation, it does not capture longer term retention rates, especially for international students as some are eligible for a 3-year post graduation work permits.

Location of Residence after Graduation, Class of 2009–10



Note: Graduates from outside Alberta include international students and Canadian students who are applying from outside Canada.
Source: Alberta Graduate Outcomes Survey, Class of 2009–10 (custom tabulation).

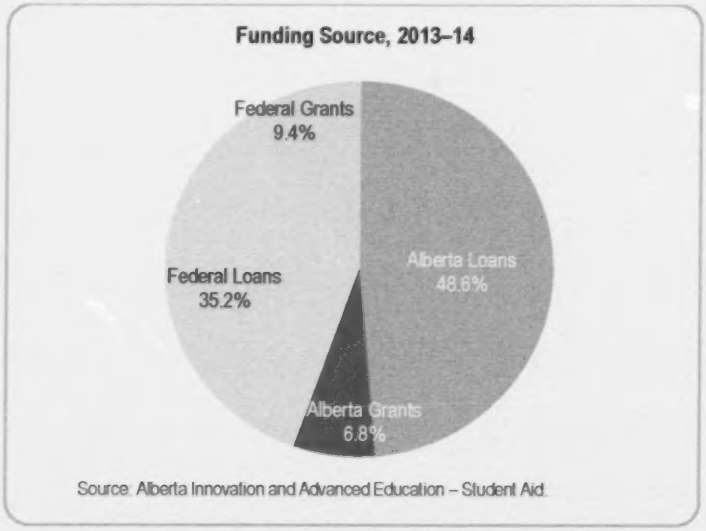
Student Funding

As part of IAE's survey of high school students, students planning to pursue additional education or training after high school are asked how they plan to cover the cost of their post-secondary education. The greatest proportion of students indicated that they intend to get help by working part-time while in school (37%) and/or from family/parents (35%). About one out of five students reported that they would use scholarships (22%), or summer earnings (19%). The majority (56%) of these students reported that they had received information on student loans, grants or scholarships available from the Government of Alberta, primarily from their school counsellor.

The Alberta Graduate Outcomes Survey of the class of 2009–10 showed that most graduates worked while taking classes and many relied on financial aid from government and/or non-government sources. Nearly three-quarters (72%) of graduates reported working while taking classes at an Alberta post-secondary institution, and 54% of graduates used some form of borrowing to finance their post-secondary education—39% of graduates reported receiving a government student loan and 29% of graduates reported receiving some form of non-government financing for education-related expenses. The median total debt at the time of graduation was $14,000. Over two-thirds (68%) of graduates received scholarships, grants or bursaries during their studies at Alberta post-secondary institutions, with the median amount received being $4,000.[93]

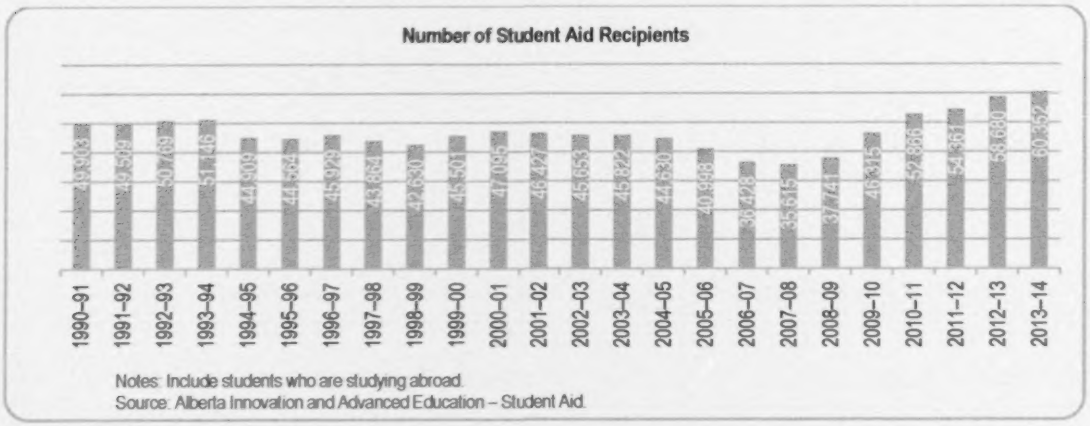
Student Aid Alberta – Loans and Grants

The Student Aid Alberta program issues loans and grants to students demonstrating financial need. Government student aid helps cover the basic costs of education, including tuition, fees, books, supplies, and basic living costs. Student loans are interest-free while students are in school, and students are not required to make payments while in school and for six months after leaving their studies. Federal and provincial grants are available for low income students, students caring for children, and those with permanent disabilities. When students apply to Student Aid Alberta, they are automatically considered for loans and grants from both the provincial and federal governments.



Source: Alberta Innovation and Advanced Education – Student Aid

In 2013-14, 60,352 full-time students were issued a total of approximately $775 million in federal and provincial loans and grants, at an average of approximately $12,850 per student. This represents the 6th consecutive year of increase in the number of Student Aid recipients.[94] Increased demand could be attributed to changing demographic trends (diverse learners having different financial needs), different economic conditions and program changes that have increased the number of students eligible to receive loans and grants.

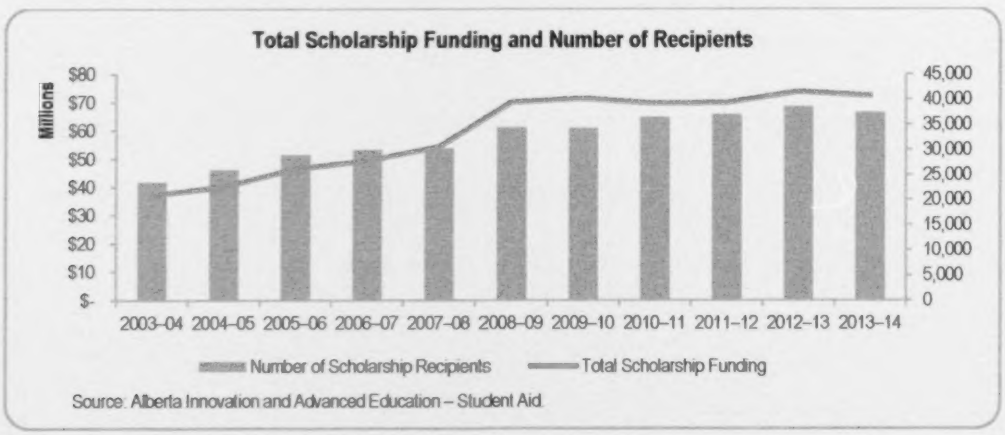


Notes: Include students who are studying abroad.
Source: Alberta Innovation and Advanced Education – Student Aid.

Alberta Scholarship Programs

Scholarships are designed to reward students' past excellence and encourage continued academic performance at a high level. They also serve as a goal for students, to inspire them to achieve their best results and reward them for their efforts. Awards are an incentive and reward for a variety of activities, such as leadership, community engagement, attraction and retention.

Alberta offers sixty different scholarship and award programs that reward students at all levels and for various types of excellence, including academic, athletic, artistic and community service. In 2013–14, a total of 37,386 students received approximately $72.5 million in government scholarships and awards.



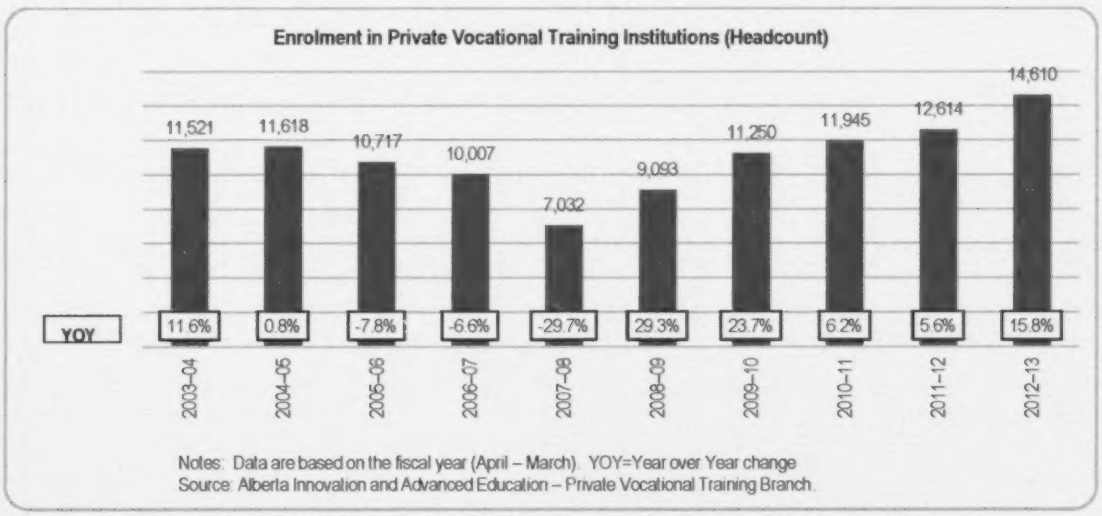
Source: Alberta Innovation and Advanced Education – Student Aid.

Private Vocational Training

Alberta's private vocational training system consists of approximately 140 providers that offer over 800 licensed programs. Private vocational training organizations provide focused occupational training in fields with viable employment opportunities. Licensed programs are offered in a wide variety of fields, such as acupuncture, emergency medical services, massage therapy, business administration, esthetics, and multimedia.

IAE licenses and monitors private vocational training programs in accordance with the *Private Vocational Training Act* and Regulation. This legislation allows private career colleges to participate in Alberta's adult learning system and provides consumer protection to students enrolled in licensed programs. As part of the application and licensing process, private vocational training providers are required to demonstrate industry support and the existence of labour market demand for graduates, as well as the relevance of the curriculum, appropriateness of admission requirements and suitability of instructor qualifications. If a professional body regulates the field, its requirements must be met before a provider applies for a licence.

In 2012–13, 14,610 students were enrolled in the private vocational training system—the highest level of enrolment ever. The 15.8% increase in 2012–13 was the fifth consecutive year of increases and represented the highest increase in enrolment in the past 3 years.



Notes: Data are based on the fiscal year (April – March). YOY=Year over Year change
Source: Alberta Innovation and Advanced Education – Private Vocational Training Branch.

In terms of performance outcomes, all private vocational providers annually report their graduation rates (the percentage of students who graduated from a program, compared to the number who were expected to graduate during the reporting period) and job-placement rates (the percentage of job-seeking graduates who found related employment during the reporting period) to IAE. In 2012–13, the overall graduation rate for learners from private vocational training providers was 81%, and their job-placement rate was 90%.[95] The majority (75%) of 2009–10 graduates from private vocational training institutions were satisfied overall with their educational experience. Nearly three-quarters of graduates were also satisfied with the quality of program (73%) and quality of teaching (73%). The majority (62%) of graduates agree that the program they took at a private vocational training institution was worth the financial cost.[96]

Apprenticeship and Industry Training

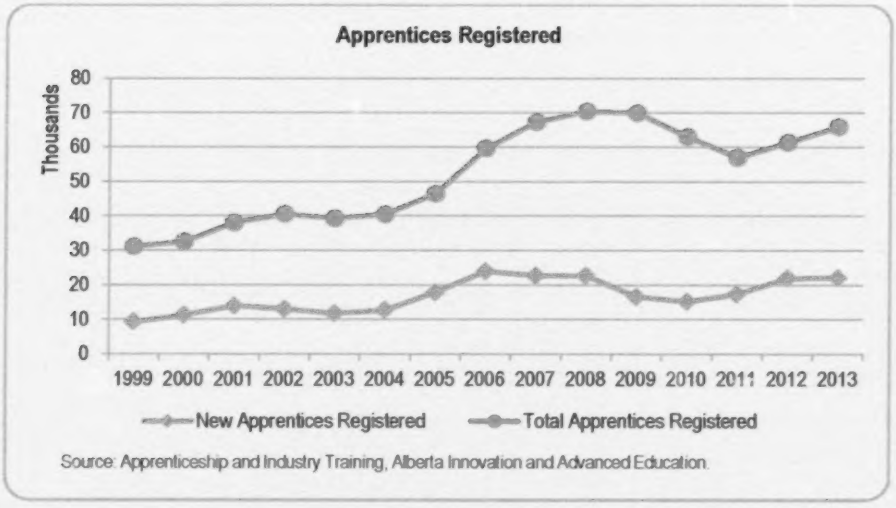
Apprenticeship is a form of post-secondary education where people earn as they learn skills in a particular trade. A registered apprentice is a person participating in an apprenticeship program under a contract registered with IAE. While becoming an apprentice requires an employer, learners must also attend apprenticeship technical training to complete an apprenticeship program. In addition to attending apprenticeship technical training, credit may also be granted for completing a number of recognized technology and technician programs. Approximately 80% of an apprentice's time is spent on the job under the guidance of a qualified tradesperson and the other 20% involves technical training. Technical training is offered at 11 of Alberta's technical training institutes and colleges.

There are a variety of ways an apprentice can participate in technical training. Technical training is often delivered through "block release," where the apprentice spends a block of time (typically eight weeks per year) in the classroom. In some trades, technical training is offered in other formats, such as blended learning (combined online and laboratory learning), training delivered one day a week for several months, and on-site classes at the workplace. Some apprentices may obtain study materials or individual learning modules to assist with their learning.

Industry establishes training and certification standards and provides direction to the system through an industry committee network and the Alberta Apprenticeship and Industry Training (AIT) Board. The GOA provides the legislative framework and administrative support for the system, and IAE acts as the registrar. Because the system is industry-led, apprenticeship programs have consistent and standardized technical training course content across institutions. This allows apprentices some flexibility to take different periods of technical training at different institutions, where available. While Alberta has about 12% of Canada's labour force, its employers hire and trains approximately 18% of the country's apprentices.[97]

Apprenticeship Registration

As of December 31, 2013, more than 65,000 apprentices were registered in Alberta's apprenticeship and industry training system. Given apprenticeship programs' close ties to industry and their integrated work-and-learning model, the increase or decrease in registrations in apprenticeship programs tends to correlate with economic ups and downs. This is quite distinct from other post-secondary programs, where enrolments tend to be counter-cyclical to economic trends. During the period 1999 to 2004, between 9,000 and 14,000 new apprentices were registered by IAE annually. Due to heightened economic activity in Alberta and its high demand for tradespeople, the number of new registrations started to rise in 2005 and reached approximately 23,000 in 2008. The economic slowdown of 2009 saw the numbers of new apprentices drop during 2009 and 2010. Starting in 2011, as the economy recovered, the number of new apprentices also increased. In 2013, Alberta employers hired and registered more that 22,000 new apprentices.[98]



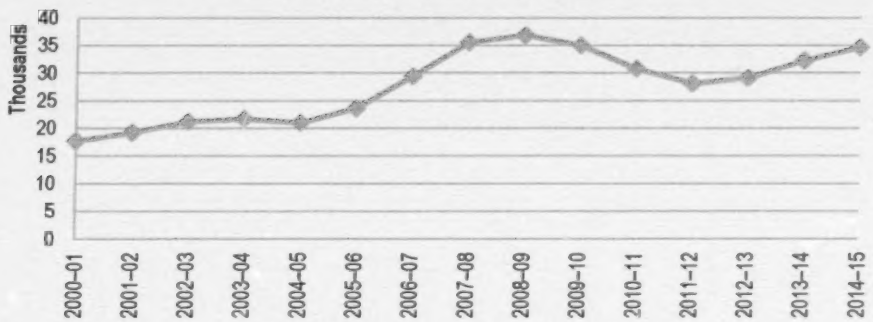
Source: Apprenticeship and Industry Training, Alberta Innovation and Advanced Education.

Technical Training Seats Offered

Apprenticeship technical training seats are scheduled at institutions based on the number of registered apprentices eligible for training in each region, trade, and period; anticipated number of new apprentices; employer/apprentice preferences; availability of training facilities; current and historical class-fill rates and the number of apprentices scheduled to attend current classes who will progress to the next level.

When demand for technical training is high, funding is focused on apprenticeship seats. When demand drops, funding may be reallocated to system enhancements such as development of alternate delivery strategies, program updates or technology renewal. This flexibility allows apprenticeship technical training to address direct apprenticeship needs. It is normal for seats to be added during the year as required, as the apprenticeship and industry training system has a continuous intake and graduation system. The number of apprenticeship seats offered each year shows a strong correlation with the employment rate of the previous calendar year.

With fewer new apprentices starting in 2009 and 2010 as a result of the economic downturn, fewer apprenticeship technical training seats were required. However, with the increase in new apprentices in 2011 and 2012, the number of technical training seats offered increased in 2012–13 and again in 2013–14.[99]



Notes: Additional apprenticeship seats may be added in-year.
Source: Apprenticeship and Industry Training, Alberta Innovation and Advanced Education.

Technical Training Seats Offered by Service Region

Geographic service region	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15
Calgary	11,312	10,635	8,728	7,844	8,081	8,621	8,926
Edmonton	15,080	14,724	13,542	12,346	12,551	13,706	14,812
Central	4,133	3,762	3,218	2,895	3,040	3,554	4,062
Grande Prairie	1,661	1,480	1,271	1,198	1,274	1,577	1,772
Lakeland	1,283	1,142	996	1,032	1,228	1,417	1,544
Lethbridge	1,269	1,137	949	876	940	1070	1122
Keyano	1,040	1,016	970	850	852	962	946
Medicine Hat	679	693	709	668	714	834	938
Northern Lakes	221	214	241	225	244	296	352
Portage	188	184	151	172	182	198	194
Total	36,866	34,987	30,775	28,106	29,106	32,235	34,669

Notes: Figures do not include seats in bridging programs.
Regional allocation is determined at the institution level.
Figures do not include Delmar College, Marvel College, the Eveline Charles Academy, or other private training providers.
Source: Apprenticeship and Industry Training, Alberta Innovation and Advanced Education.

Satisfaction with Apprenticeship Programs and Completion Rate

Apprenticeship graduates and employers express a high level of satisfaction with Alberta's apprenticeship and industry training system. When apprenticeship graduates of 2011/2012 were asked if they would still have chosen to become an apprentice given their experience with the Alberta apprenticeship program, 96% said they would have still chosen to become an apprentice. Graduates were also highly satisfied with the overall quality of on-the-job training (95%) and technical training (96%). In the 2012 survey of employers, 92% of respondents expressed overall satisfaction with Alberta's apprenticeship and trade certification system. The vast majority of employers also expressed satisfaction with the skills of certified journeypersons (95%), apprenticeship technical training (86%), and the effectiveness of on-the-job training (96%).[100]

A cohort of apprentices that completed all the requirements for their first period of an apprenticeship program (including technical training, on-the-job training and period exams) were tracked, and 77% had gone on to complete their program within two years past the normally expected completion date or by 2012–13.* More than 7,500 apprentices and trainees were certified in Alberta's designated trades and occupations in 2013. In addition, more than 1,000 individuals were awarded qualifications certificates in a designated trade.[101]

Trade Futures

As part of Alberta Innovation and Advanced Education's survey of high school students, the students who were planning to pursue education or training were asked if they had considered the trades as a career option. Just over half (56%) of these students indicated they had considered the trades as a career option. Of those students who had considered the trades as a career option, 51% indicated that they actually planned to pursue a career in the trades.[102]

In general, there is high regard for the trades among students. The vast majority of students who plan to pursue education or training agree that the trades are changing rapidly and require many new high tech and problem solving skills (93%), a career in the trades provides personal satisfaction (90%), a career in the trades pays well (90%), and that there are good opportunities for women in the construction, automotive and technical trades (83%). However, the majority (63%) of students who plan to pursue education or training indicated that their parents prefer they go to university or college instead of apprenticeship, and 25% think that people with good grades do not go into the trades. Hence, while trades have high visibility among high school students and are actively considered by many as a career choice, trades might still have challenges related to parents' perceptions. Given the high influence that parents have on decisions regarding post-secondary studies, addressing these perceptions would be useful in further elevating trades' position as a career choice for high school students.[103]

IAE, in coordination with Alberta Education, provides supports to high school students who would like to choose trades as a career. While in high school, students can become apprentices through the Registered Apprenticeship Program (RAP). In the RAP, they obtain on-the-job training and work experience as credit toward both an apprenticeship program and a high school diploma while earning an income. Alberta Innovation and Advanced Education's survey of high school students indicated that the majority (65%) of high school students who plan to pursue education or training were aware of the RAP.[104] Approximately 1,600 high school students were registered in the RAP in 2013, indicating that there is opportunity to further grow the RAP. As of March 31, 2013, approximately $5.9 million has been awarded to Alberta apprentices through the Alberta Apprenticeship and Industry Training Board Family of Scholarships.[105]

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* The completion rate is based on trade programs that are 2, 3 and 4 years in length combined. One year trades are excluded.

Foundational Learning

The *Roles and Mandates Policy Framework* identifies two system outcomes—vibrant learning communities and strong learning foundations—that require a strong community-based adult learning system that operates in alignment with post-secondary institutions.* Foundational learning refers to the full array of learning that aims to bring individuals up to the equivalent of a high school graduate, enable them to pursue further learning, have satisfying and meaningful employment, and fully participate in society. It includes literacy, English as a Second Language (ESL), academic upgrading and preparations, high school equivalency, skills development, and employment preparation.

Foundational learning is a required programming area of the Community Adult Learning Program. Many post-secondary institutions also provide a level of foundational learning, usually adult basic upgrading, high school equivalency, and skills development.

Community Adult Learning

IAE's Community Adult Learning Program provides funding and other supports to 125 community-based organizations so they can offer a variety of part-time, non-credit adult learning opportunities in Alberta communities. These organizations are the primary providers of basic literacy and English language learning opportunities in rural Alberta.

Funded organizations receive a mix of three grants from IAE, each with a different focus:

- The **Community Adult Learning Council (CALC) grant** supports 84 organizations in offering foundational and transitional programming, such as Adult Basic Literacy, English or French language learning, and Employability Enhancement (e.g. first aid, General Equivalency Diploma preparation). It also supports the delivery of programming designed to address local community needs, such as crime prevention, farm succession, and parenting workshops.
- The **Volunteer Tutor Adult Literacy Services (VTALS) grant** supports 71 organizations that provide basic instruction to adults who want part-time, one-on-one or small group tutoring or classroom instruction to improve their literacy or English language skills.
- The **Family Literacy Initiative Fund (FLIF) grant** supports 55 organizations that offer family literacy programming to families with social and economic barriers. This programming aims to boost the confidence and literacy skills of parents so they can effectively engage their preschool children in early language and learning activities.

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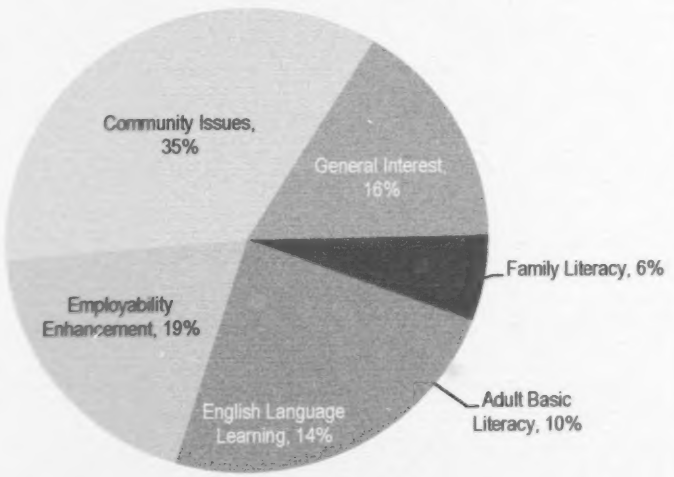
* For more information, see the Roles and Mandates Policy Framework (http://eae.alberta.ca/post-secondary/policy/rules.aspx) and *Building Vibrant Learning Communities* (http://eae.alberta.ca/post-secondary/policy/vibrantlearning.aspx). Also see Living Literacy: A Literacy Framework for Alberta's Next Generation Economy (http://eae.alberta.ca/livingliteracy) and Increasing Learner Access through System Alignment: Final Report of the Community Adult Learning Task Team (http://eae.alberta.ca/media/268596/calttreport.pdf).

The Community Adult Learning Program supports a wide variety of learning opportunities, which are grouped under seven programming types. In 2012–13, a total of 74,609 learners were served through one-on-one tutoring, small group tutoring and group learning opportunities. Community Issues learning opportunities were the most popular programming (35%), followed by Employment Enhancement programs (19%), General Interest programs (16%), English Language Learning (14%), Adult Basic Literacy (10%), Family Literacy (6%), and French Language Learning (<1%). Community Issues learning opportunities were the most popular programming type in most service regions, with the exception of Keyano, Grand Prairie, Medicine Hat and Northern Lakes service regions. English Language Learning was the most popular program in Keyano service region, with approximately three-quarters of learners participating, and in Northern Lakes region General Interest (36%) and Employability Enhancement (32%) programs were the most popular.

The more popular programming does not always reflect the highest need. Attracting learners to foundational learning—Adult Basic Literacy, English and French Language Learning, and Family Literacy—is more challenging than other types of programming as learners in foundational programs often face multiple barriers to learning, and programs require more time and resources in order for learners to achieve their goals.

Community Adult Learning Participation by Program Type, 2012–13



Note: French Language Learning represented less than 1% of programming offered and is not included in the chart.
Source: Alberta Innovation and Advanced Education – *Community Adult Learning Program 2012/2013 Report to Partners*

Foundational Learning in Post-Secondary Institutions

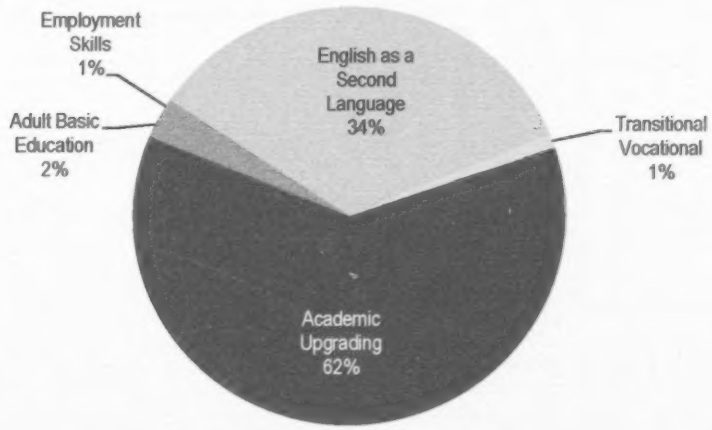
Alberta's post-secondary institutions also play a key role in community education and foundational learning. Comprehensive Community Institutions (CCIs), through their regional stewardship role, partner and collaborate with local communities and community adult learning providers in order to increase access to a range of learning opportunities. In addition, many institutions have satellite campuses and learning centres in several communities that provide expanded access in response to regional needs.

In 2012–13, a total of 20,622 adults accessed foundational learning programs through post-secondary institutions. The number of learners accessing foundational programs through post-secondary institutions has decreased for the past 3 years (from 22,772 in 2009–10 to 20,622 in 2012–13).

Enrolment (FLE) in foundational programs in 2012–13 was primarily from the 18–34 age groups (74.8%). The majority of learners in Transitional Vocational programs, Adult Basic Education and ESL were enrolled full-time, whereas Academic Upgrading and Employment Skills had more part-time learners.

Learners who enrol in foundational learning programs at post-secondary institutions are primarily enrolled in Academic Upgrading courses (62%) or English as Second Language courses (34%), with the remaining learners enrolled in Adult Basic Education (2%), Employment Skills programs (1%) and Transitional Vocational (1%) programs. While these proportions have remained relatively stable for the last 5 years, enrolment in Academic Upgrading programs has declined over the past 4 years.

Enrolment (FLE) in Foundational Learning Programs at PSIs
2012–13



Note: Foundational Programs are defined as those fall under the following CIP categores "Basic Skills", "Technology Education/Industrial Arts Programs" and "High School/Secondary Diplomas and Certificate Programs".
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting

Within the post-secondary system, close to three-quarters (72.8% in 2012–13) of FLE enrolments in foundational programs are in the Comprehensive Community Institutions. The remaining enrolments were in Baccalaureate and Applied Studies Institutions (18.5%), Polytechnical Institutions (8.1%) and Independent Academic Institution (0.6%).

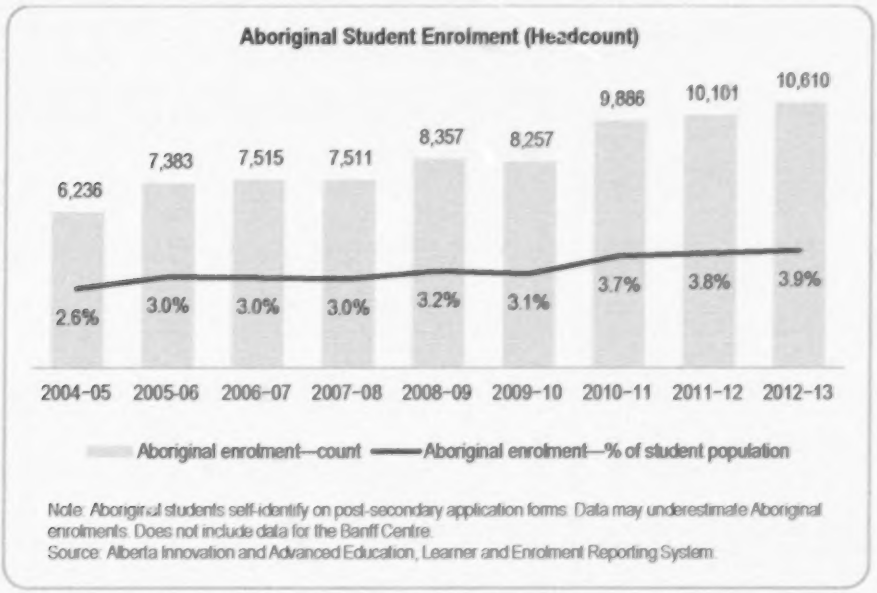
These statistics indicate that the majority of enrolment in approved foundational learning programs is in CCIs, while other providers in the advanced learning system remain minimally involved in foundational learning activities. This demonstrates that such foundational learning remains a critical component of the mandate and work of CCIs, which provide a valuable linkage to further learning and employment across the province. As identified in the *Roles and Mandates Policy Framework*, progress is still needed to adequately integrate Alberta's advanced learning system with its community-based learning system so that learners have a wider variety of options and access points and Albertans can continue to increase their education at all levels.

Collaboration between CCIs and community adult learning is an important component of foundational learning in Alberta. Further analysis of the extent of collaboration and of student transitions between foundational learning and CCIs (and potentially other post-secondary institutions) may benefit the advanced learning system.

Alberta's foundational learning network gives individuals an opportunity (often through post-secondary studies) to acquire the skills necessary to develop to their full potential. The opportunity to acquire and develop skills through foundational learning is vital given the vast number of individuals who bypass further post-secondary and transition directly to the labour market, and because many Albertans perform below minimum literacy (Level 2 or lower in the Programme for the International Assessment of Adult Competencies). Moreover, the foundational learning network promotes lifelong learning which has a number of benefits both for the individual and for Alberta's society and economy.

Aboriginal Learners

The number of Aboriginal students enrolled in Alberta's publicly funded post-secondary institutions has increased from 6,236 in 2004–05 (the first year of data collection related to Aboriginal indicator) to 10,610 in 2012–13. While the number of Aboriginal students is expected to increase due to the growing number of Aboriginal people in the province, it is important to note that the number of Aboriginal students as a proportion of total enrolment has also increased from 2004–05 (2.6%) to 2012–13 (3.9%).

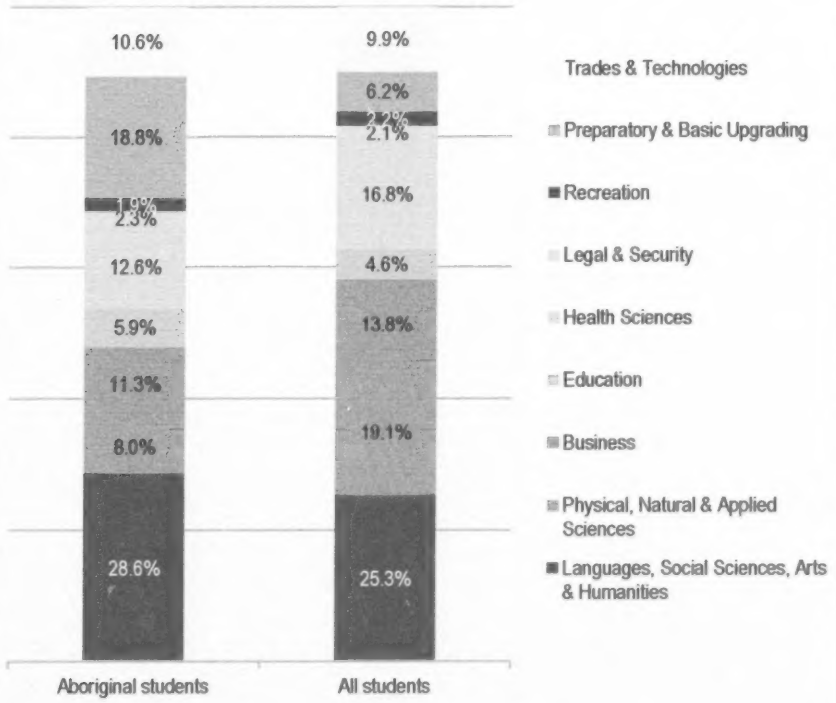


Note: Aboriginal students self-identify on post-secondary application forms. Data may underestimate Aboriginal enrolments. Does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

Please note that figures relating to Aboriginal Albertans in post-secondary education are sourced from students self-declaring their Aboriginal status at the time of application. Student's self-declare when applying to a program/specialization. However, this self-declaration is not carried forward when the student applies to another program/specialization. Additionally, self-declared Aboriginal status is not carried forward from the K–12 system to the post-secondary system. Due to this reliance on self-identification and a lack of available data on students attending Aboriginal Colleges,[106] the number of Aboriginal learners attending post-secondary education is likely understated.

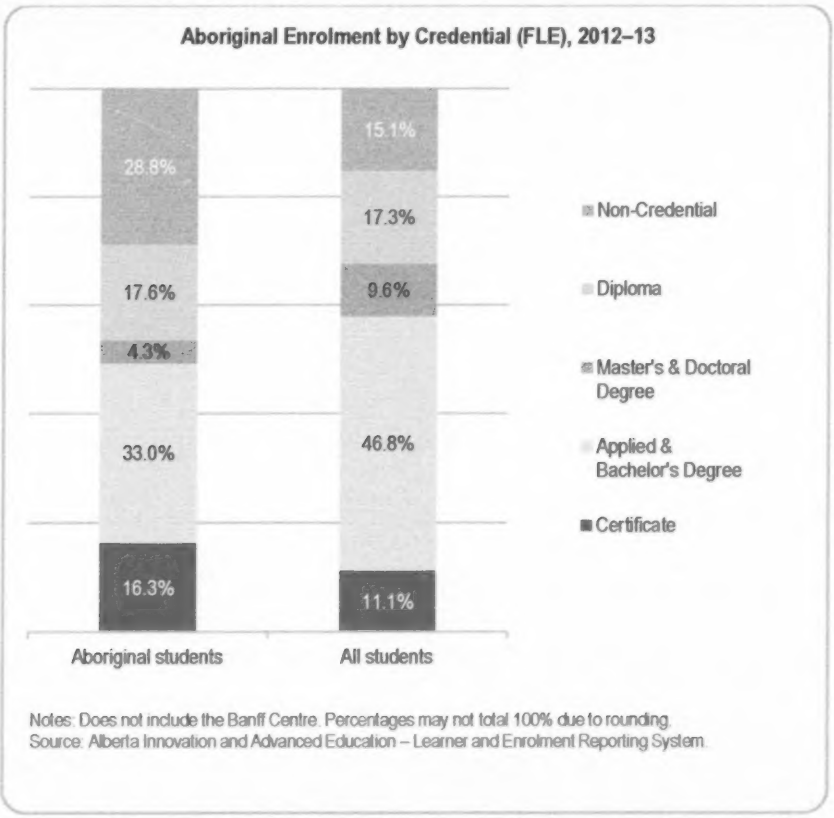
In 2012–13, Aboriginal enrolment (FLE) was highest in Languages, Social Sciences, Arts & Humanities (28.6%) program band, followed by Preparatory & Basic Upgrading (22.6%), Health Sciences (11.9%) and Business (10.3%). When compared to all students, the share of Aboriginal enrolment was lower in Physical, Natural & Applied Sciences, Health Sciences, and Legal & Security program bands.

Aboriginal Enrolment by Program Band (FLE), 2012–13



Notes: Does not include the Banff Centre. Percentages may not total 100% due to rounding.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.

Consistent with the strong enrolment in Preparatory and Basic Upgrading programs, a relatively high number of Aboriginal learners were enrolled in programs where a parchment is not awarded (29.6%). These included programs like open studies, upgrading, employability, and job readiness.



As these numbers indicate, skills development training serves a critical demand among the Aboriginal population. However, they also stress the importance of continuing to develop strategies that enable Aboriginal individuals to progress from preparatory to credentialed programming that offers access to greater economic and social well-being. Currently, a large proportion of the Aboriginal learner population engages in basic training, and forgoes opportunities to take part in further post-secondary learning. While this basic training can aid in immediate entry into the labour market, it can also prepare Aboriginal individuals for further post-secondary studies. Strategies that better articulate learner pathways promoting the transition from preparatory training into credentialed programs will facilitate increased post-secondary learning in a population that is greatly under-represented in many occupations within the province.

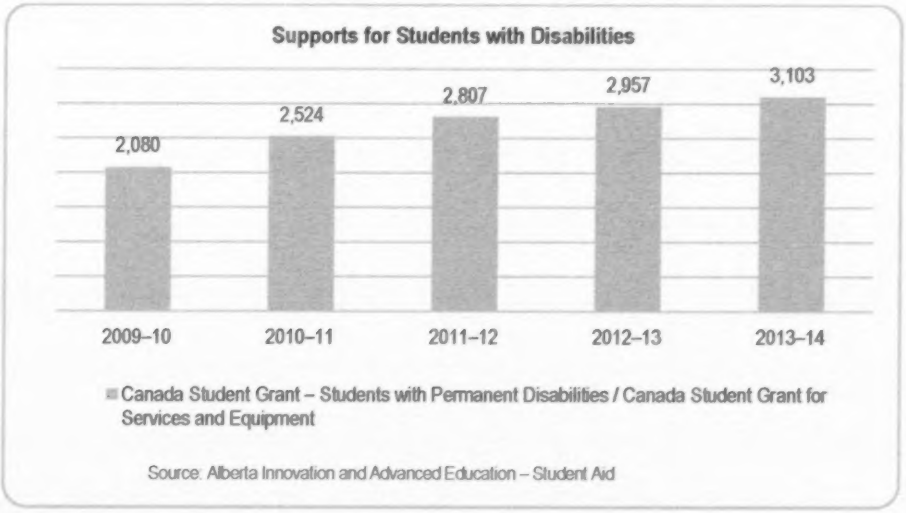
Learners with Disabilities

A key policy direction outlined in *A Learning Alberta* and the *Roles and Mandates Policy Framework* is to increase access for groups traditionally under-represented in post-secondary education, including individuals with disabilities.[107]

The number of students with disabilities seeking services and accommodations at post-secondary institutions in 2012–13 was 11,238—the highest it has been since 2007–08. This represents 4.1% of all headcount enrolments in 2012–13.[108]

Students who have a documented permanent disability and are attending full-time post-secondary studies may be eligible for additional student aid through Canada Student Grant for Students with Permanent Disabilities, and Canada Student Grant for Services and Equipment for Students with Permanent Disabilities. Students not eligible for federal funding are supported through Alberta Grant for Students with Permanent Disabilities (applies to services/equipment).

In 2013–14, 3,103 learners received disability funding from Student Aid through the Canada Student Grant for Students with Permanent Disabilities and Canada Student Grant for Services and Equipment for Students with Permanent Disabilities. The number of students who received these supports increased each year for the past 5 years.[109]



In Alberta, children or students with special education needs are assessed and coded according to Alberta Education Special Education Coding Criteria. In the 2012–13 academic year, 74,716 students attending Early Childhood Services to Grade 12 were identified as having a mild, moderate or severe disability. This included 49,924 students who were coded as having a mild or moderate disability, 24,792 students who were coded as having a severe disability, and 583 students with more than one special education code.[110] The number of students with disabilities will place increasing pressure on education systems (both K–12 and post-secondary) to provide appropriate assessments and accommodations to support all learners.

The Canadian Survey on Disability (CSD) was conducted in 2012. The survey gathered information about Canadians aged 15 and over whose daily activities are limited due to a long-term condition or health-related problem. Results from this survey indicate that 12.5% of Albertans, approximately 369,000 individuals aged 15 years or older, cope with some form of disability. The prevalence of disability increases with age, with 35.7% of Albertans aged 65 or older reporting some form of disability. Though the overall proportion of Albertans (12.5%) living with some form of disability is lower than the nation as a whole (13.7%), Albertans aged 45 years and older were more likely to report some form of disability than elsewhere in Canada. Women were more likely to report some form of disability than men, which was consistent with the rest of Canada.[111]

Participants in CSD were asked to describe the severity of their disability based on the frequency with which it interferes with their day-to-day life, as well as the degree of difficulty added by said interference. The majority of Albertans (57.6%) ranked their disability as mild to moderate, with 21.5% describing their disability as severe and 20.9% describing their disability as very severe.[112]

In Alberta, 6% of CSD respondents indicated they were enrolled school/college/university since September 2011, with 4% enrolled in formal education at the time of the survey. The type of education these respondents were attending was equally split between college and trade school (2%), university (2%) and K-12 school (2%). The proportion of disabled Albertans who were enrolled in any formal education in the past 5 years was 11%. These findings are similar to the findings at nation level.[113]

Albertans with disabilities who participated in formal learning reported that their disabilities affected educational choices. About one-in-ten (12%) Albertans with disabilities who participated in formal education recently reported that they were enrolled as a part-time student because of their disability. Albertans with disabilities who participated in formal learning in the past five years reported that their disability influenced their choice of courses and career (43%). They also indicated that, because of their disabilities, they changed their course of studies (24%) and took fewer courses (33%).[114]

VALUE FOR INVESTMENT

Educational Quality

Benefits Associated with Post-Secondary Education

Statistics Canada's paper *An Investment of a Lifetime? The Long-term Labour Market Premiums Associated with a Postsecondary Education* looked at the potential benefits of post-secondary education by comparing the long-term labour market outcomes of Canadians with a bachelor's degree or a college certificate (not including trade certificates) to those with a high school diploma. The study tracked the labour market outcomes of individuals for a 20 year period (1991 to 2010), while they are in their mid-30s to mid-50s. Note that the study examines only the financial benefits associated with post-secondary education and does not take into account the direct or indirect costs associated with attending post-secondary education.

The results show that Canadians with a bachelor's degree or a college certificate enjoy more favourable labour market outcomes than those with a high school diploma as their highest educational qualification. Compared to individuals with high school diploma, the cumulative additional earnings for the 20-year period (in 2010 dollars, after controlling for inflation) for bachelor's degree holders were: $728,000 for men and $442,000 for women. For individuals with college certificates, the cumulative additional earnings were: $248,000 for men and $180,000 for women. The higher earnings for men compared to women with a bachelor's degree are due to the large premium for men in private sector and the higher likelihood of women working in the public sector. The study also found that, for men and women, a bachelor's degree and a college certificate are associated with more years of coverage in an employer-sponsored pension plan and fewer layoffs, indicating greater job security.[115]

While the original study did not present results at the provincial level, a separate analysis was conducted to look at Alberta results. Due to its small size, the Alberta sample may be less representative of the population as a whole and hence results from this analysis should be used with caution. Similar to findings at the Canada level, Albertans with post-secondary education earned more compared to those with high school diploma. However, the effect of post-secondary education was less pronounced in some cases for Alberta when compared to Canada. Compared to individuals with a high school diploma, the cumulative additional earnings for the 20-year period (in 2010 dollars, after controlling for inflation) for bachelor's degree holders in Alberta were: $507,000 for men and $515,000 for women. For individuals with college certificates, the cumulative additional earnings were $361,000 for men and $91,000 for women. Similar to national level findings, Albertans with bachelor degrees and college certificate have more years of coverage in an employer-sponsored pension plan and had fewer layoffs.[116]

Satisfaction with Post-Secondary Education

The Alberta Graduate Outcomes Survey, which is conducted every two years, indicates that graduates of Alberta's post-secondary institutions are highly satisfied with their educational experience. Survey results of the class of 2009–10 showed that the vast majority of graduates were satisfied with the overall quality of their educational experience (92%). Graduates were also satisfied with the quality of the program they attended (90%), and the quality of teaching in their program (90%). The large majority (86%) of graduates also indicated that they feel the financial investment in their post-secondary studies was worth the benefits gained.[117] In addition to satisfaction with the quality of program, quality of teaching and program being worth the financial investment, graduates' perceptions regarding the overall quality of their educational experience were also influenced by their satisfaction with their current job and how related their current job is to the subject-area knowledge they acquired through the program.[118]

More than three-quarters of graduates of the class of 2009–10 agreed that the program they attended provided them with an opportunity to improve themselves (85%), the knowledge of a particular field of study (83%), and a desire to continue learning more (79%). Two-thirds or more graduates felt that the program improved employment opportunities (71%), provided chances of improved income (69%) and provided the skills needed for a particular job (67%).[119]

Alberta graduates tend to feel that their program has added to their skills, knowledge and abilities to a positive extent. Reflecting on their educational experience, approximately three-quarters of graduates feel that it helped them to learn independently (78%), work independently (78%), analyze information (76%), solve problems (72%), and work well with others (71%).[120]

The vast majority of graduates indicated that they would recommend both the institution they attended (94%) and the program they completed (87%) to others.[121]

The above results from Graduate Outcomes Survey have remained consistent over the past three survey cycles.

Education and Labour Market Outcomes

Alberta continues to enjoy one of the strongest labour markets in Canada. In 2013, the province's total employment rose by 61,400, a 2.9% increase from 2012—the second highest among all provinces in Canada.[122] Alberta's labour market participation (73.1%) has remained consistent with previous years and remains the highest in country. The unemployment rate (4.6%) in 2013 was unchanged from 2012, and is the second lowest in the nation.

These numbers highlight two realities of the Alberta economy: the period of strong economic growth is continuing, and an expanded labour force will be necessary to foster this growth. Alberta's post-secondary system will play an increasingly important role in educating and training skilled professionals, though it is only one component in a larger overall strategy. Attracting new Albertans (international and interprovincial migrants) continues to be vital to ensuring long-term economic and employment growth.

Unemployment Rates (15+ years), Canada and Provinces

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Canada	6.8%	6.3%	6.0%	6.1%	8.3%	8.0%	7.4%	7.2%	7.1%
Newfoundland and Labrador	15.1%	14.7%	13.5%	13.2%	15.5%	14.4%	12.7%	12.5%	11.4%
Prince E ward Island	10.8%	11.1%	10.3%	10.8%	12.1%	11.2%	11.3%	11.3%	11.5%
Nova Scotia	8.4%	7.9%	8.0%	7.7%	9.2%	9.3%	8.8%	9.0%	9.0%
New Brunswick	9.6%	8.7%	7.5%	8.5%	8.8%	9.3%	9.5%	10.2%	10.4%
Québec	8.3%	8.1%	7.2%	7.2%	8.5%	8.0%	7.8%	7.8%	7.6%
Ontario	6.6%	6.3%	6.4%	6.5%	9.0%	8.7%	7.8%	7.8%	7.5%
Manitoba	4.8%	4.3%	4.4%	4.2%	5.2%	5.4%	5.4%	5.3%	5.4%
Saskatchewan	5.1%	4.7%	4.2%	4.1%	4.8%	5.2%	5.0%	4.7%	4.0%
Alberta	4.0%	3.4%	3.5%	3.6%	6.6%	6.5%	5.5%	4.6%	4.6%
British Columbia	5.8%	4.8%	4.3%	4.6%	7.7%	7.6%	7.5%	6.7%	6.6%

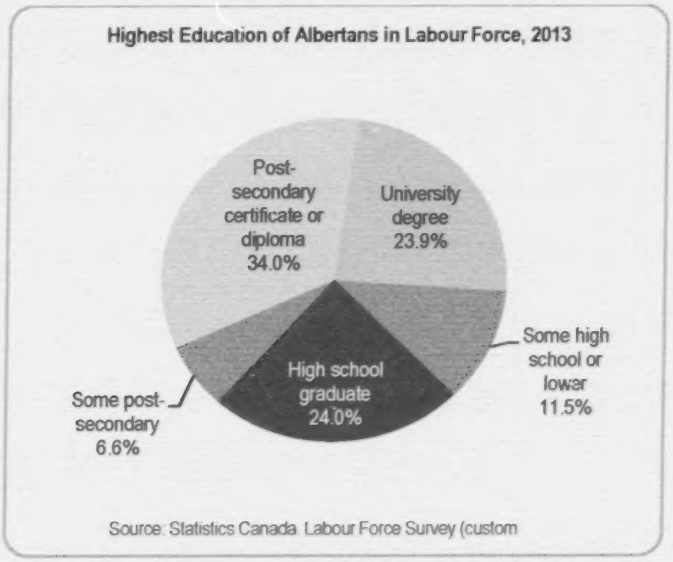
Labour Force Participation Rates (15+ years), Canada and Provinces

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Canada	67.1%	67.0%	67.4%	67.7%	67.1%	67.0%	66.6%	66.7%	66.5%
Newfoundland and Labrador	58.7%	59.1%	59.0%	59.4%	59.0%	59.9%	60.2%	61.6%	61.2%
Prince Edward Island	68.3%	68.5%	67.9%	68.2%	67.5%	67.9%	68.1%	68.0%	69.3%
Nova Scotia	63.3%	62.6%	63.5%	63.6%	64.3%	64.2%	63.7%	64.1%	63.8%
New Brunswick	63.3%	63.3%	63.5%	64.3%	64.2%	63.6%	62.8%	63.1%	63.2%
Québec	65.5%	65.4%	65.7%	65.8%	65.3%	65.4%	65.2%	65.1%	65.2%
Ontario	67.8%	67.4%	67.7%	67.9%	67.1%	67.1%	66.8%	66.5%	66.4%
Manitoba	68.5%	68.5%	69.0%	69.3%	69.1%	69.6%	69.3%	69.1%	68.7%
Saskatchewan	67.9%	68.8%	69.5%	69.6%	70.0%	69.9%	69.2%	69.5%	70.0%
Alberta	72.7%	73.4%	74.2%	74.7%	74.3%	72.9%	73.7%	73.4%	73.1%
British Columbia	65.3%	65.3%	66.0%	66.2%	65.6%	65.5%	65.0%	65.0%	64.1%

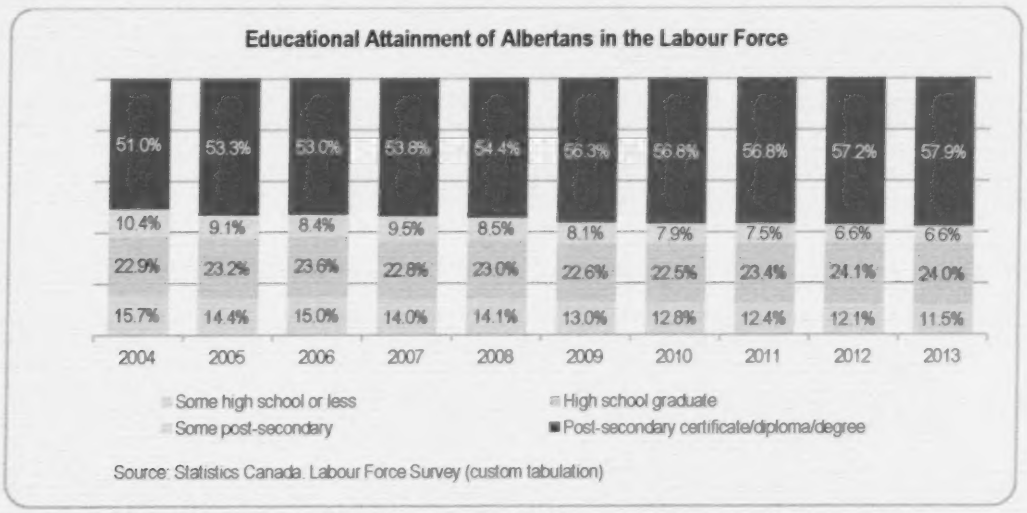
Source: Statistics Canada. Labour Force Survey (custom tabulation)

Educational Attainment of Labour Force

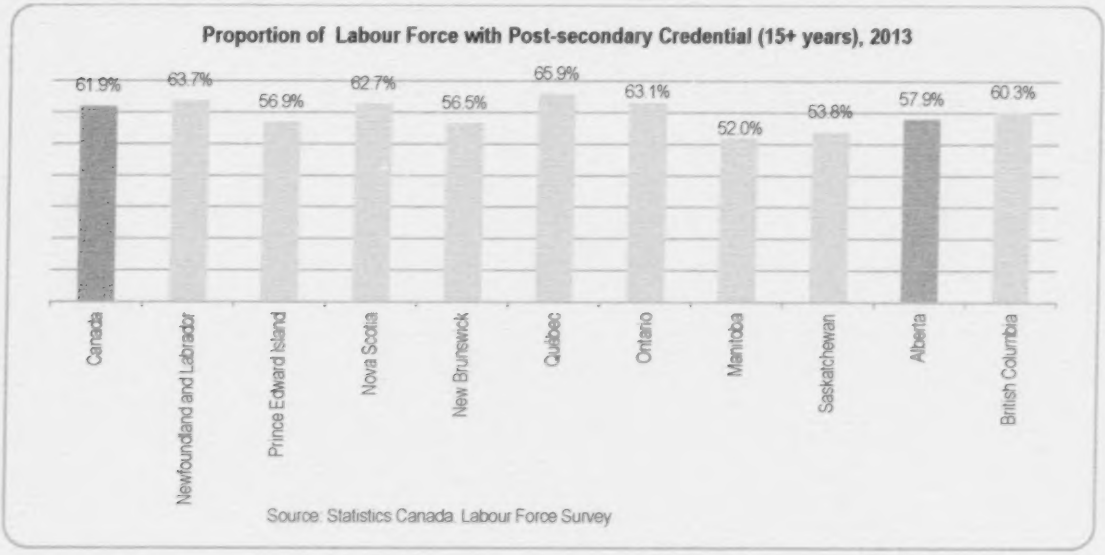
In 2013, the majority (57.9%) of Alberta's labour force had a post-secondary credential, including 23.9% who had a university bachelor's or graduate degree and 34% who had a post-secondary certificate or diploma as their highest level of education.


Highest Education of Albertans in Labour Force, 2013
Post-secondary certificate or diploma 34.0%
University degree 23.9%
Some high school or lower 11.5%
High school graduate 24.0%
Some post-secondary 6.6%
Source: Statistics Canada. Labour Force Survey (custom

Over the past 10 years an increasing number of Albertans in the labour force have post-secondary credentials as their highest educational qualification. The proportion of Alberta's labour force that has attained diploma, certificate or degree as highest level of education went up from 51.0% in 2004 to 57.9% in 2013. Since the post-secondary participation rate of Albertans has not increased over time, this increase could be because of the influx of migrants who already possess post-secondary qualifications.

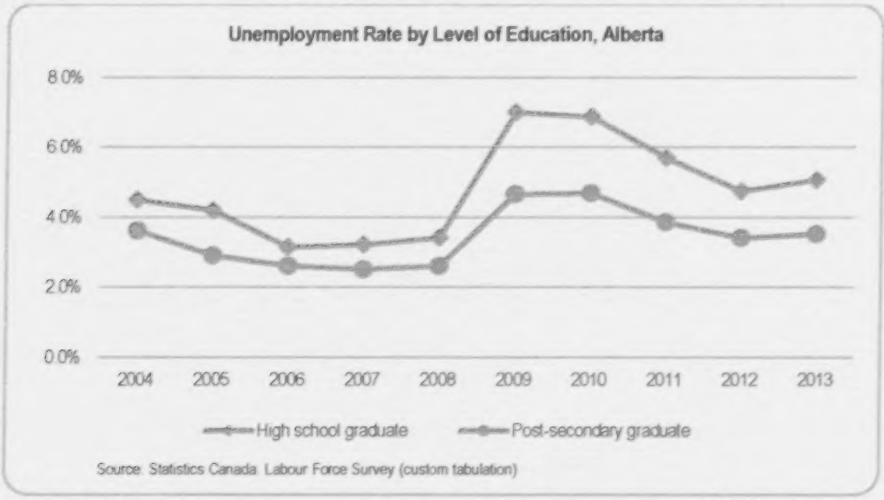

Educational Attainment of Albertans in the Labour Force
51.0% 53.3% 53.0% 53.8% 54.4% 56.3% 56.8% 56.8% 57.2% 57.9%
10.4% 9.1% 8.4% 9.5% 8.5% 8.1% 7.9% 7.5% 6.6% 6.6%
22.9% 23.2% 23.6% 22.8% 23.0% 22.6% 22.5% 23.4% 24.1% 24.0%
15.7% 14.4% 15.0% 14.0% 14.1% 13.0% 12.8% 12.4% 12.1% 11.5%
2004 2005 2006 2007 2008 2009 2010 2011 2012 2013
Some high school or less
High school graduate
Some post-secondary
Post-secondary certificate/diploma/degree
Source: Statistics Canada. Labour Force Survey (custom tabulation)

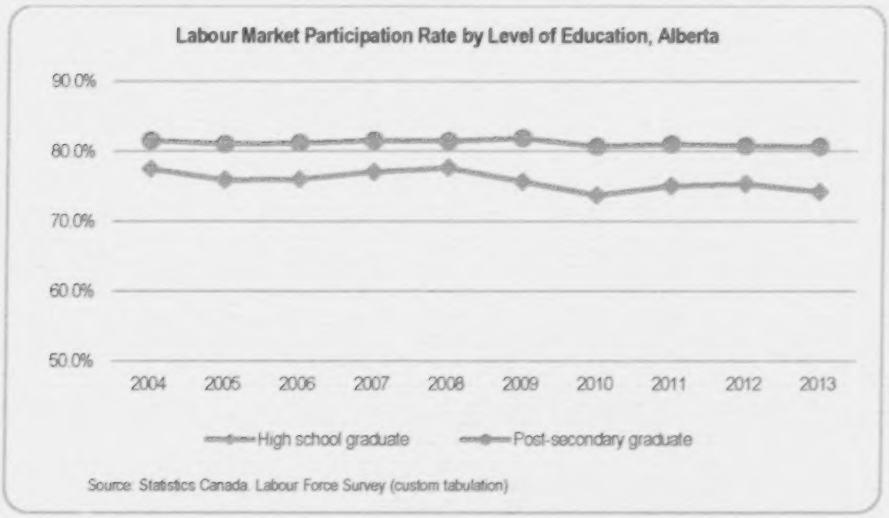
However, in 2013, the proportion of Alberta's labour force with a post-secondary credential (57.9%) was lower than the Canadian figure of 61.9%.[123] Post-secondary institutions are competing with a strong labour force as many young Albertans opt to join the workforce after completing high school, as opposed to pursuing advanced learning opportunities. This is particularly true in Alberta as the strong labour market allows high school graduates pursue attractive job opportunities more easily than in other provinces.



Post-secondary Education and Employment Outcomes

In general, there is an inverse relationship between unemployment and educational attainment. As the level of educational attainment increases, there is a higher likelihood for better labour market outcomes. In 2013, Albertans (15 years and older) with a post-secondary credential had an unemployment rate of 3.5%, compared to 5.1% for those with a high school diploma as their highest level of education. It is important to note that the spike in unemployment rates during years of economic slowdown is larger among high school graduates than post-secondary graduates. The gap between the two groups has remained larger after economic slowdown (2010 to 2012) compared to before (2004 to 2008). This indicates that post-secondary graduates not only enjoy better labour market outcomes, but are also better shielded from economic fluctuations. Labour market participation rates for these groups also exhibit similar patterns.[124]



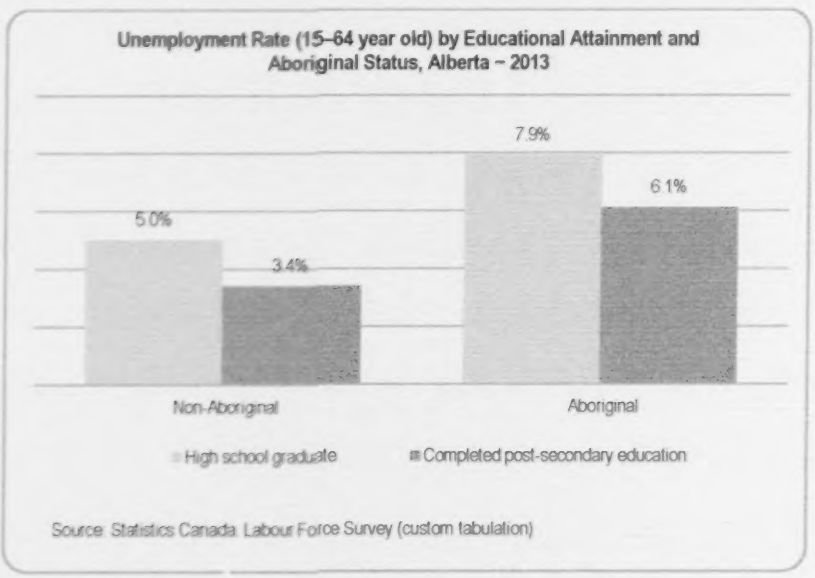


Aboriginal Peoples

Aboriginal Albertans have historically experienced weaker labour market outcomes than non-Aboriginal Albertans, and in 2013 this trend was unchanged. In 2013, 71.7% of Aboriginal Albertans (15 years and older) living off-reserve participated in the labour force, compared to 73.1% of non-Aboriginal Albertans. The unemployment rate for Aboriginal people living off-reserve was 8.2% in 2013, a noted improvement compared to 2012 (11.5%), but is still higher than the rate (4.5%) for non-Aboriginal Albertans. Over the past 5 years, the unemployment rate of Aboriginal Albertans has always been higher than that for non-Aboriginal Albertans, with the gap ranging between 3.7 and 8.9 percentage points.[125]

While there are significant differences between Alberta's Aboriginal and non-Aboriginal populations, there are also substantial differences in Alberta's Aboriginal subpopulations. The labour force participation rate for Aboriginal women was 65.1%, lower than the 78.8% rate for their male counterparts. Neither figure is a notable deviation from 2012. Additionally, the unemployment rate of the First Nations population (11.3%) was almost double that of the Métis population (6.5%).[126]

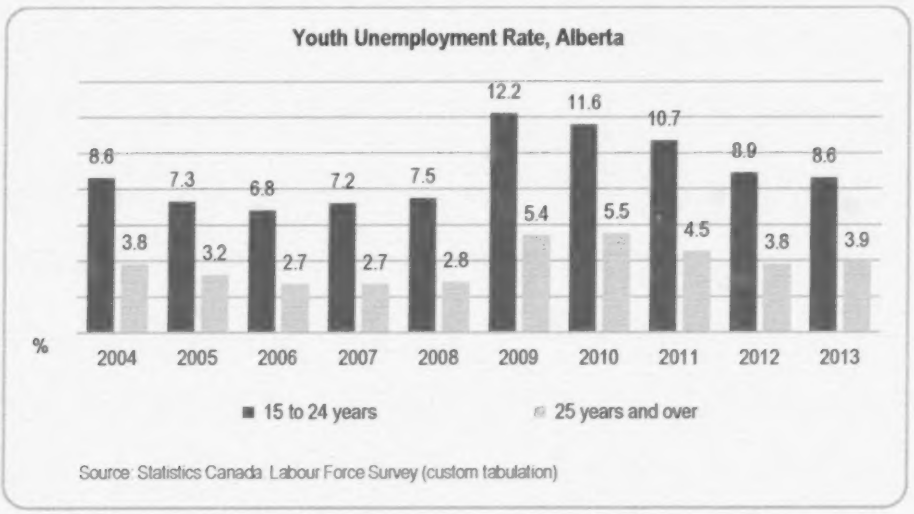
As with the general population, there is an inverse relationship between Aboriginal Albertan's unemployment and educational attainment. In 2013, Aboriginal Albertans with a post-secondary credential had an unemployment rate of 6.1%, compared to 7.9% for those with a high school diploma as their highest level of education. When holding levels of education constant there is still a gap between the rates of unemployment for Aboriginal Albertans and Non-Aboriginal Albertans.[127]



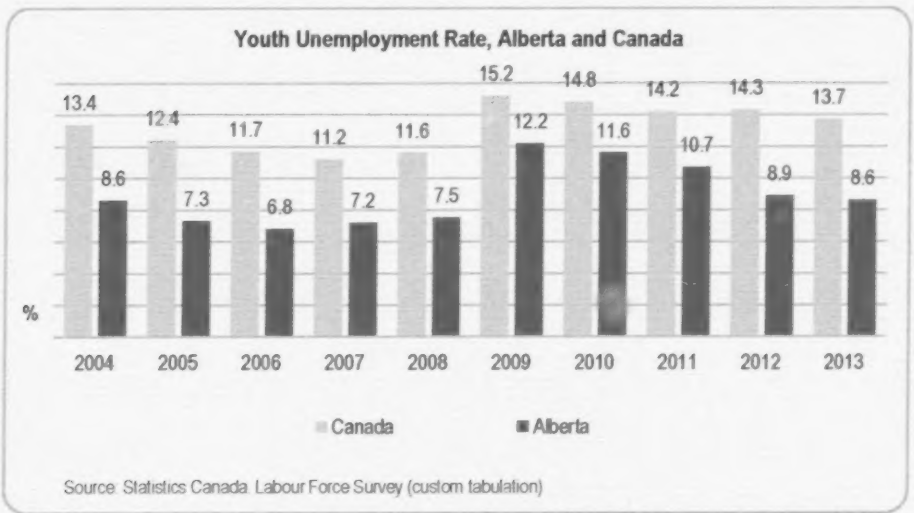
Youth

In 2013, youth (15 to 24 years of age) formed 15.5% of the working-age population of Canada. Across all provinces, Alberta (16.2%) had the fourth-largest proportion of youth in the working-age population, behind Manitoba (16.9%), Saskatchewan (16.5%), and Prince Edward Island (16.4%).[128]

Historically, the youth unemployment rate has been higher than that of older Albertans', a trend which continued in 2013. Alberta's 2013 youth unemployment rate of 8.6% was lower than the Canadian average of 13.7%, with the gap between the Alberta rate and the Canadian average increasing since 2009. As with general population, unemployment rates tend to be higher among youth without post-secondary education than those with post-secondary education.[129]



Source: Statistics Canada, Labour Force Survey (custom tabulation)



Source: Statistics Canada, Labour Force Survey (custom tabulation)

International Immigrants

In 2013, about 9.3% of the 6.5 million working-age immigrants (15+ years) in Canada lived in Alberta. Approximately 625,000 working-age immigrants lived in Alberta in 2013, representing 19.7% of Alberta's working-age population. Alberta had the third highest employment rate for immigrants in Canada in 2013 at 64.6%, behind Saskatchewan and Manitoba.[130]

Immigrants to Alberta experienced an unemployment rate of 5.4%, above the provincial average of 4.6%, and very recent immigrants were less likely to have found employment, reporting a 7.0% unemployment rate. Additionally, on average, Albertan immigrants had an hourly wage $1.85 less than the overall Alberta population in 2013.[131]

In 2013, the proportion of post secondary graduates among international immigrants to Alberta was higher than those born in Canada (58.2% vs. 50.5%). However, unemployment rate was higher among immigrants with post-secondary education than for those born in Canada. Immigrants to Alberta with post-secondary certificates/diplomas had an unemployment rate of 4.7%, higher than that for non-immigrants with similar education (3.5%), and immigrants with university degrees had an unemployment rate of 4.5%, compared to 2.8% for non-immigrants.[132]

Detailed labour force profiles for Aboriginal, Youth and Immigrant groups are published at: http://work.alberta.ca/labour/labour-force-profiles.html.

Labour Market Outlook

Alberta's working age population (those aged 15 to 64 years) constituted about 71% of its total population in 2013. While the number of people in working-age is expected to increase, the share of working-age people in the total population is expected to decrease to about 64% by 2041. A similar trend is expected for the core labour force age group (those aged 25 to 54 years).[133] Though Alberta's population growth has outpaced other provinces; economic growth, low unemployment rates and slower growth in working-age population indicate that Alberta should anticipate labour shortages for the foreseeable future. In 2013, two thirds of employed Albertans had a post-secondary education, with 34.4% having a certificate or diploma credential and 24.2% having a university degree. It is anticipated that the ongoing development of the provincial economy will concentrate labour market opportunities into areas requiring some form of post-secondary education.

Employment by Educational Attainment, Alberta 2013

Level of education	Population employed	Share of employed
Less than high school	243,000	11.0%
High school graduate	528,100	23.9%
Some post-secondary	144,700	6.5%
Post-secondary certificate or diploma (includes trade certificate)	759,900	34.4%
University degree	535,300	24.2%
Total	**2,211,000**	**100.0%**

Source: Statistics Canada, Labour Force Survey (custom tabulation)

According to *Alberta's Occupational Demand and Supply Outlook* report, from 2012 to 2023, Alberta's labour market is projected to grow by approximately 407,000 jobs. This represents an average annual growth rate of 1.6%. A total of about 311,000 workers are expected to join the labour force, at an average annual rate of 1.2% during this period. As a result, Alberta could experience a cumulative labour shortage of about 96,000 workers over this 10-year period.[134] About 63% of the 407,000 new jobs created will likely require post-secondary education, and a cumulative labour shortage of about 55,000 is expected in jobs that require post-secondary education over the 10-year period. Note that *Alberta's Occupational Demand and Supply Outlook* report defines labour shortage as net new job openings that are unfilled resulting from a change in employment minus the change in labour supply.

Occupational Demand and Supply Outlook for Alberta, 2012 – 2023

Projection	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Demand (000s)	2,150	2,191	2,230	2,264	2,296	2,335	2,369	2,411	2,447	2,485	2,521	2,557
Labour Supply (000s)	2,219	2,245	2,271	2,298	2,325	2,353	2,381	2,410	2,439	2,469	2,499	2,530
Annual Shortage		15,272	12,191	7,264	4,970	11,550	5,263	13,414	7,066	8,338	5,870	4,913
Cumulative Shortage		15,272	27,463	34,727	39,697	51,247	56,510	69,924	76,990	85,328	91,198	96,111

Note: Labour shortage = (Demand [year t+1] – Demand [year t]) – (Supply [year t+1] – Supply [year t])
Source: Alberta's Occupational Demand and Supply Outlook 2013 - 2023

Alberta's Occupational Demand and Supply Outlook report also provides demand and supply forecasts by National Occupational Classification (NOC) codes. IAE uses these figures as the basis to project of labour market shortages by program band by aligning NOC codes to Classification of Instructional Programs (CIP) codes.

Over 2013–23, IAE expects occupations related to the trades and health sciences to have the greatest labour shortages. At the program band level, most labour market shortages are forecasted for graduates from the Trades and Technologies (27.9%); Health Sciences (23.2%); Physical, Natural and Applied Sciences (18.7%); and Business (13.6%) and program bands. Based on what learners are currently choosing, most enrolment growth is expected to be concentrated in the Language Arts, Social Sciences, Arts and Humanities (25.0%) program band, followed by Physical, Natural and Applied Sciences (20.9%), and Health Sciences (16.5%).

Comparing each program band's proportion of the anticipated labour market shortage with the system's enrolment mix helps explain the province's labour market shortages breakdown. For example, while 23.2% of labour market shortages are expected to occur in Health Sciences, a total of 16.5% of the post-secondary system's enrolment growth in the 2013 to 2023 period is expected to occur in this program band. It should be noted that the number of additional graduates that are expected over the 2013–23 period is taken into account while estimating the labour shortage.

In the past years, post-secondary institutions have responded to these needs by developing program content and delivery models. In 2011–12, the education and training program bands that experienced the most significant growth in capacity through approved new programs and specialization were trades and technology, business and management, and health sciences. IAE is continuing to work closely with institutions, other ministries and key stakeholders to promote programming that furthers Alberta's priorities through a collaborative and integrated approach.

Labour Market Demand Projection by Program Band

Program Band	Projected cumulative labour shortage 2013-23	Projected enrolment growth (FLE) 2013-23
Business	13.6%	14.3%
Education	3.6%	4.8%
Health sciences	23.2%	16.5%
Languages, Social Sciences, Arts & Humanities	10.5%	25.0%
Legal and Security	1.2%	1.5%
Physical, Natural & Applied Sciences	18.7%	20.9%
Recreation	1.3%	2.1%
Trades and Technologies	27.9%	9.7%
Preparatory and Basic Upgrading	n/a	5.1%
All Programs	**100.0%**	**100.0%**

Notes: Rows may not total due to rounding. Labour shortage = projected demand – projected supply.
Sources: Alberta Enterprise and Advanced Education – Occupational Supply Outlook Model, In-Jector Model.

Post-secondary Educational Output

Program Completion

A program completer is an individual who has completed all necessary program requirements and is awarded a credential (when offered by the program). Individual institutions determine whether students have completed program requirements for graduation. Students attending Alberta's post-secondary institutions may be enrolled in more than one program and may receive multiple credentials in the same academic year.

In 2012–13, 47,338 learners completed their program of studies at Alberta's publicly funded institutions. The Trades and Technologies program band had the highest number of program completers (10,465), followed by Health Sciences (10,404) and Business (7,973). The total number of completers has shown an increasing trend in the past 5 years.

Program Completers by Credential Type and Program Band

	2008–09	2009–10	2010–11	2011–12	2012–13
Certificate	11,427	13,479	14,804	15,126	14,222
Degree – Bachelor's/Applied	16,179	16,606	17,148	17,654	18,065
Degree – Master's	2,753	3,052	3,393	3,602	3,740
Degree – Doctoral	576	611	659	650	732
Diploma	9,645	9,869	10,146	10,384	10,579
All Credential Types	40,580	43,617	46,150	47,416	47,338
Business	6,712	7,298	7,657	7,883	7,973
Education	2,746	2,678	2,751	2,790	2,678
Health Sciences	8,245	8,381	9,101	10,386	10,404
Languages, Social Sciences, Arts & Humanities	6,682	6,808	6,903	6,803	6,880
Legal & Security	1,305	1,112	1,216	1,265	1,110
Physical, Natural & Applied Sciences	5,937	6,056	6,525	6,598	7,049
Preparatory & Basic Upgrading	2	4	0	0	0
Recreation	708	711	722	836	779
Trades & Technologies	8,243	10,569	11,275	10,855	10,465
All Program Bands	40,580	43,617	46,150	47,416	47,338

Notes: Does not include data for the Banff Centre. Include completers in Certificate, Degree and Diploma programs only. The numbers do not indicate unique graduates, as students who graduate from multiple program bands or credentials types are counted under both categories.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.

Completion Rate

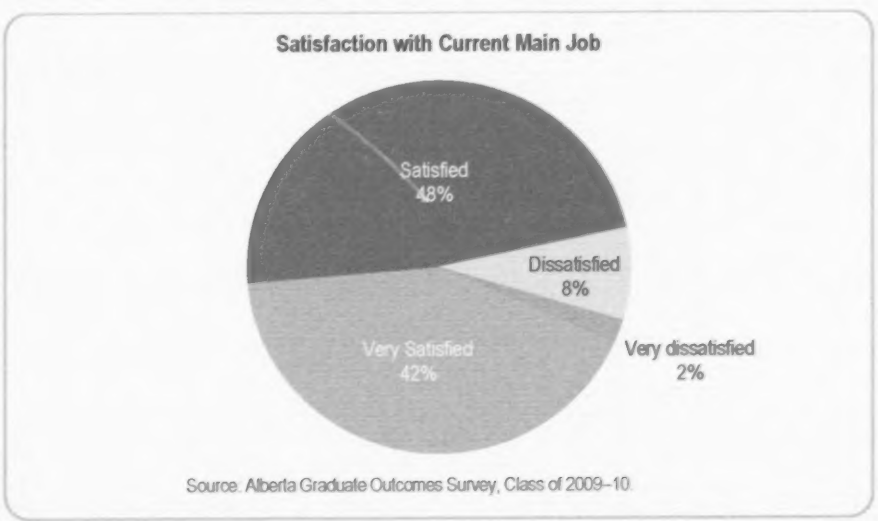
The completion rate refers to the percentage of students in a starting cohort that complete the requirements for a credential within a fixed timeframe. The completion timeframe is the credential length plus 3 years. For example, certificate credentials are 1 year in length, so students completing within 4 years of the cohort year would be counted as a completer. The completion time frames for various credential types are as follows: Certificate – 4 years, Diploma – 5 years, Master's Degree – 5 years, Doctoral Degree – 6 years, Bachelor's Degree – 7 years.

Completion rates varied between credential types. Based on the latest available cohort results, approximately three-quarters of students in Master's degree (76.2%) and Bachelor's degree (74.5%) programs completed their program within the respective completion timeframes. The completion rates for the diploma and certificate credential types were 64.1% and 63.8% respectively, while 45.8% of doctoral students completed within the completion timeframe.[135]

Employment Outcomes of Graduates

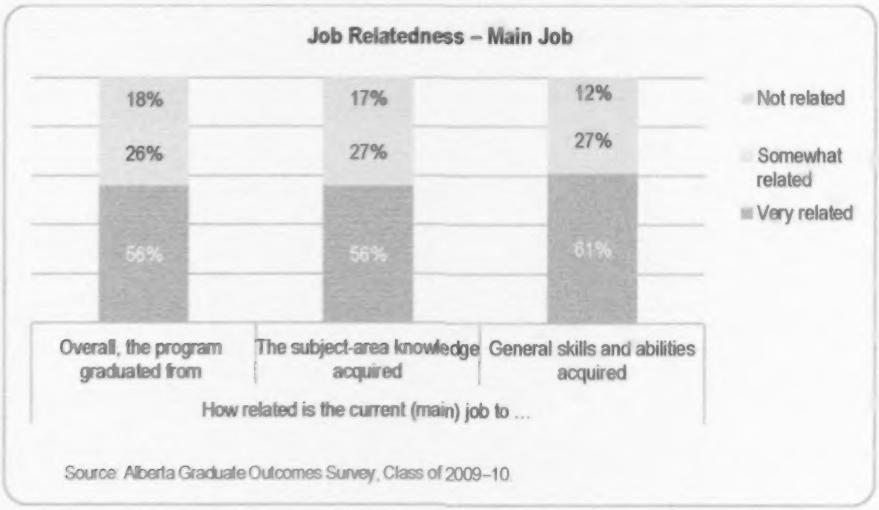
The Alberta Graduate Outcomes Survey, which is conducted every two years, assesses employment outcomes of graduates from Alberta's post-secondary institutions. Survey results of the class of 2009–10 showed that, at the time of the survey, the majority (87%) of graduates were employed. This translates to an employment rate of 96% among who are currently in the active labour force (those who are currently employed or looking for work). The median income of graduates was $50,000.[136]

As part of Alberta Graduate Outcomes Survey, the graduates were also asked a series of questions to understand their satisfaction with and perceptions regarding their current job. Alberta graduates who are currently employed are satisfied overall (90%) with their current job, with 48% being satisfied and 42% being very satisfied with their current job.[137]

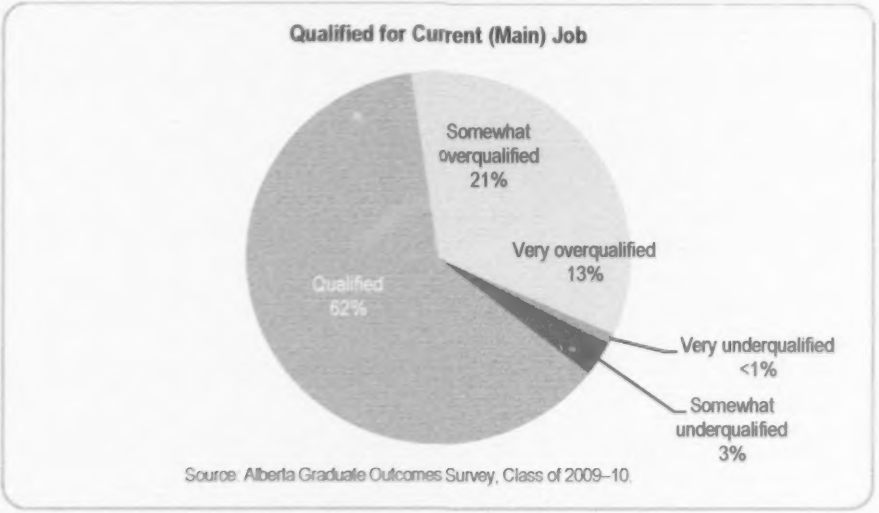


Source: Alberta Graduate Outcomes Survey, Class of 2009–10

Graduates were also asked about the relevance of the education they acquired to their current main job. The majority (56%) of employed graduates feel that overall, their current job is very related to the program from which they graduated. Another 26% feel that their current job is somewhat related to the program from which they graduated. Most employed graduates also felt that their current job is related to the subject-area knowledge (56% very related and 27% somewhat related) and the general skills and abilities they acquired (61% very related and 27% somewhat related).[138]



The majority of employed graduates felt that that their educational qualifications match well with their current job, with 62% indicating that they were appropriately qualified to undertake their current job. Most of the remaining graduates (34%) felt that they were somewhat or very over qualified for their current job.[139]



ADVANCING KNOWLEDGE

Research

Alberta's Innovation System

Alberta's research and innovation system is evolving. In June 2014, the GOA established an Alberta Innovation Council that provide advice to government on innovation policies, strategies and initiatives with a view to creating greater strategic alignment, coordination and integration amongst the organizations within Alberta's research and innovation system. The GOA is also developing a forward-looking framework document that will clarify roles and outline an action plan to enhance the innovation system.

IAE will continue to facilitate effective coordination of provincially funded research and innovation priorities. The Alberta Research and Innovation Plan (ARIP) is a key direction-setting document for the system communicating the research and innovation priorities of the GOA to system stakeholders. The ARIP is collaboratively developed by ministries with a strong interest in research and innovation, the Alberta Innovates corporations, and Campus Alberta representatives, and is informed by related GOA policies and strategies. While the ARIP is directional, it does not preclude specific research initiatives of ministries or the broad interests of academia, but rather signals where provincial resources will be focused to achieve results for Alberta in the longer term.

The ARIP identifies three provincial-level outcomes:

1. Broadened Economic Base
2. Effective Resource and Environmental Management
3. Healthy, Resilient Communities

The ARIP provides context and direction to Campus Alberta to inform the development of Comprehensive Institutional Plans and strategic research plans.

Campus Alberta – Roles and Mandates

Research performed at Campus Alberta institutions generates knowledge to answer complex questions, find solutions, challenge assumptions, validate prior findings, and contribute to a greater knowledge-base of scientific understanding. These roles are critical to advancing social, environmental, and economic resilience at a local, national, and international level, while also directly contributing to the development and retention of students. In Alberta, post-secondary institutions are the largest group of publicly funded research performers in the province.

The *Post-secondary Learning Act*[140] and the Roles and Mandates Policy Framework* differentiate institutions into six Campus Alberta sectors. One differentiator is the type and intensity of research activity. The Framework outlines the following three types of research:

- **Pure research** involves the generation of new knowledge, must pass peer review, generally includes the involvement of graduate students, and may or may not have immediate application.
- **Applied research** is conducted to discover new knowledge with a more identifiable and immediate practical application. This form of research tends to be more focused on the identification of practical solutions or applications. In general, applied research lends itself more readily to third-party support, including financing from the private sector, granting councils, and communities.
- **Scholarly activity** is developmental research that is conducted in support of faculty professional development. It is supplemental to the instructional function and geared to faculty enhancement and maintenance of their knowledge base to support instruction. It is aligned with degree programs offered, and may or may not involve peer review, but does not require the support of graduate students. It may or may not involve the support of external research funding. Where appropriate, scholarly activity may be conducted in collaboration with CARIs.

Alberta's Post-Secondary Research Capacity

Research activity is primarily supported by external funding sources, though internal support may also be provided, varying by sector and each institution's priorities. This external funding, sponsored research revenue, reflects the success of these institutions in garnering research awards and is an indicator of the strength and excellence of their research programs and faculty. Sponsored research revenue[141] is defined as funding garnered outside of institutional operating grants, including contracts, grants, and donations that are used to support the operating and infrastructure costs associated with research. Funding is derived from provincial and federal governments, industry, and non-profit organizations, and includes capital investments.

Pure, or basic, research is critical to the success of the overall innovation ecosystem, as the knowledge generated through such investigations becomes the foundation to applications in the future. The student learning experience and quality is enhanced by faculty working at the leading edge of their fields of study and the opportunity to train on state-of-the-art infrastructure using advanced research techniques.

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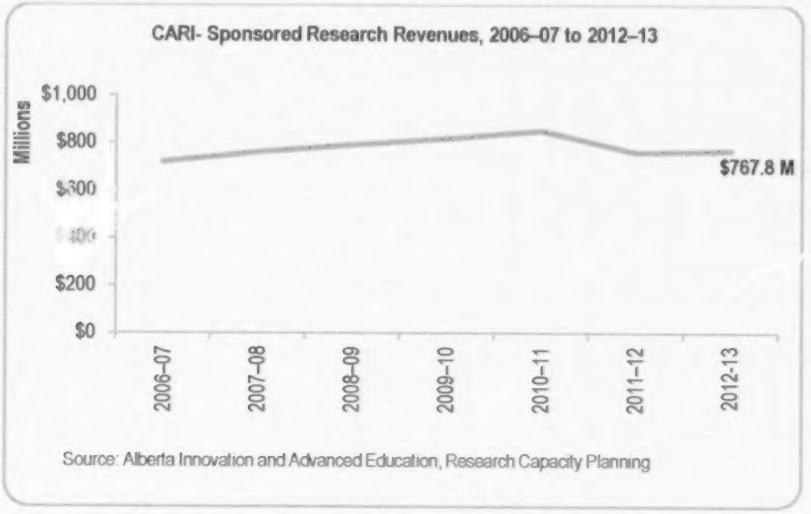
* For more information, see the Roles and Mandates Policy Framework for Alberta's Publicly Funded Advanced Learning System, available online at http://IAE.alberta.ca/post-secondary/policy/roles.aspx

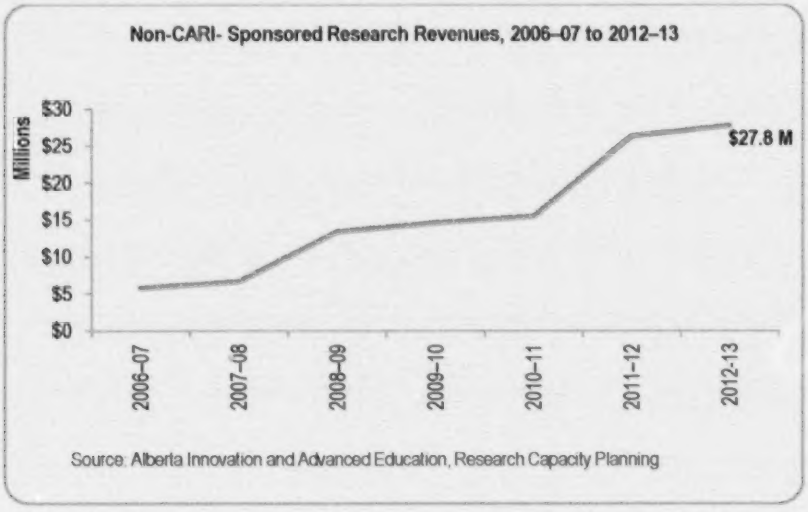
Alberta's Comprehensive Academic Research Institutions (CARIs) are the most intensive research performers in the province, providing broad-based research capacity across the post-secondary academies. Nearly all of the basic research and a considerable portion of the applied research in Campus Alberta are conducted by the CARIs: in 2012-13, CARIs garnered $767.8 million of the Campus Alberta total sponsored research revenue of $795.6 million. From 2006–07 to 2012-13, total sponsored research revenue garnered by the CARI sector increased by 6.7%—an indication of the sector's strength and competitiveness in attracting research funding.



Applied research activities within Campus Alberta are a more direct means of contributing to the economic prosperity and social well-being of the province. The Campus Alberta Roles and Mandates Policy Framework supports continued efforts to build capacity for applied research and knowledge translation at all post-secondary institutions.

Polytechnical, Baccalaureate and Applied Studies, Comprehensive Community Institutions, Independent Academic Institutions, and Specialized Arts and Culture Institutions (Non-CARIs), through the Roles and Mandates Framework, are enabled to conduct applied research. In light of their primary role as learning institutions, these sectors are encouraged to build applied research capacity in niche areas of strength and in support of their program delivery and regional economic needs. There is significant variability amongst these sectors in research capacity growth. The variability is expected and commended as some institutions have chosen to retain a more singular focus on their teaching roles and have been selective in developing applied research capacity.

Overall, Non-CARI institutions have been successful in building capacity as is evidenced by a significant jump in sponsored research revenue in the last five years, from $13.4 million in 2008-09 to $27.8 million in 2012-13. The increase is attributable to one-time opportunities to work with industry or non-profit organizations, and the development of federal and provincial programming. From 2011-12 to 2012-13, total sponsored research revenue to the Non-CARI sector increase by 5.7%.



Applied research enhances the instructional mandates of these institutions by offering hands on experience for learners, meeting regional industry knowledge needs, and developing skilled graduates in areas of regional and provincial demand.

Alberta's Research Strengths

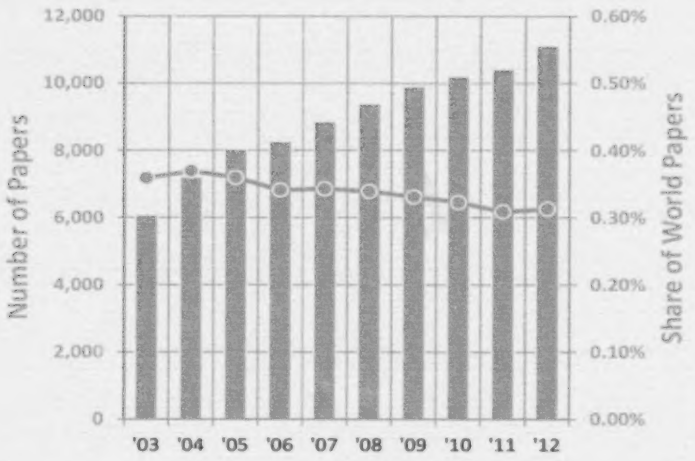
Publication in peer-reviewed journals continues to be a critical mechanism for the dissemination of scientific research and the advancement of knowledge. In Alberta, scientific research is mainly published by faculty at Alberta's Comprehensive Academic Research Institutions, though research may also originate in the private sector and other research-performing organizations.

Alberta's scholarly output is rising

Alberta researchers contribute to more than 11,000 scientific papers annually (2012). This is almost twice as many papers as their contribution 10 years earlier. Alberta is responsible for about 11% of papers produced nationally, a share that has been increasing since 2006. By contrast, on a world level, Alberta's share of papers is decreasing due in large part to the dramatic rise in production from some emerging nations such as China.[142]

The largest share of Alberta papers is in the field of Clinical Medicine followed by Engineering, Biomedical Research, Information and Communication Technologies and Enabling and Strategic Technologies.[143]

Number of Scientific Publications in Alberta as a Share of World Papers, 2003 to 2012



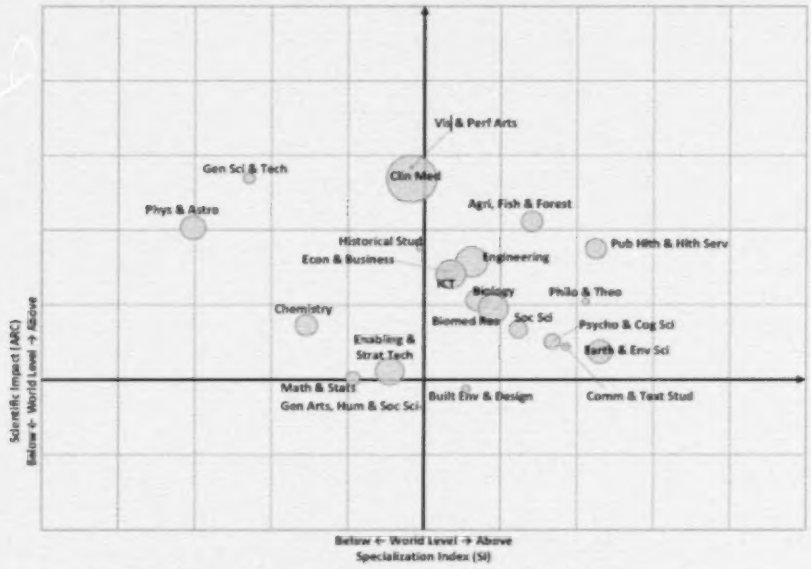
Source: Alberta Innovation and Advanced Education – Computed by Science-Metrix Inc. using Scopus data.

Alberta produces high-quality, high-impact research in most fields of science

Assessing scholarly impact allows a jurisdiction to identify whether or not its output is highly regarded at the international level. Citation by other researchers is used as a measure of scholarly impact. Based on this metric, Alberta's research stands out among the best at the world level.

By combining a citation-related impact measure with an indicator of specialization (i.e., the extent to which a jurisdiction concentrates its research output in specific fields) a map of research strengths can be drawn. The size of the bubble represents the volume of publications in the field.

Positional Analysis of Alberta in 22 Fields of Science, 2003 to 2012



Source: Alberta Innovation and Advanced Education – Computed by Science-Metrix Inc. using Scopus data.

In general, fields in the upper-right quadrant are considered to be areas of particular research strength because they are above the world average on both dimensions. Fields that appear to have particular importance for Alberta include:

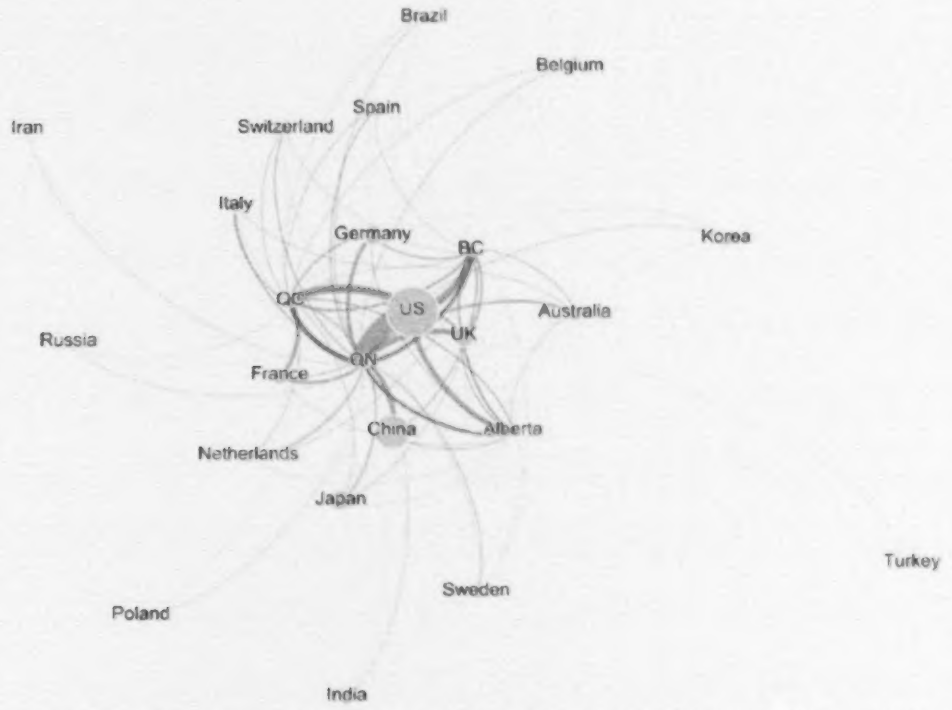
- Clinical Medicine
- Public Health
- Agriculture and Forestry
- Engineering,
- Information and Communications Technology (ICT), and
- Enabling and Strategic Technologies, more specifically in energy.

National and international collaboration is increasing

Scientific collaboration is on the rise, as researchers are developing global collaborative networks and co-publishing with colleagues worldwide. By bringing more global collaborative networks into Alberta, the province is able to participate in developments at the leading edge of science and technology internationally.

Within Canada, Alberta researchers collaborate most frequently with peers from Ontario, British Columbia and Quebec. On an international level, the United States represents Alberta's most frequent partner, followed by the United Kingdom, China and Germany.[144]

Network of Collaboration Between Alberta, Ontario, Québec, British Columbia and Top Publishing Countries in Scopus, 2003 to 2012



Notes: The size of the bubbles is proportional to the number of publications and the width of the links is proportional to the number of co-publications.
Source: Alberta Innovation and Advanced Education – Computed by Science-Metrix Inc. using Scopus data.

Cross-Sectorial Collaboration

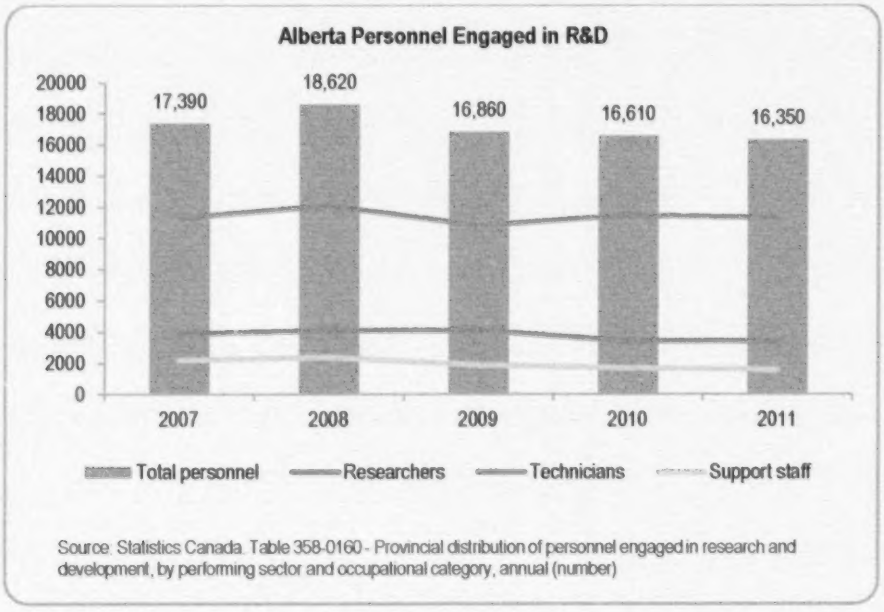
Co-publications with at least one industrial collaborator represented 4.5% of Alberta research collaborations over the 2003 to 2012 period, which is high relative to the national average of 3.5%. Alberta cross-sectorial publications were most frequent in fields related to the applied sciences like Built Environment & Design, Enabling and Strategic Technologies, Engineering, Agriculture, Fisheries and Forestry and Earth and Environmental Sciences.[145]

Personnel Engaged in Research and Development

Research and development (R&D) is a vital component of our province's innovation system and contributes significantly to Alberta's economic diversity. A large portion of research happens in post-secondary which is actively represented by all level of learners including graduate students, post-doctorate professionals and professors. Research from post-secondary institutions often fosters collaboration between institutions and industry and creates spillover effects that help foster economic development.

Statistics Canada data shows that in 2011, 228,970 personnel (researchers, technicians, and support staff) participated in R&D in sectors such as government, industry, post-secondary education, and private non-profit organizations across Canada. Most of those employed in R&D across Canada were researchers (68.7%), followed by technicians (22.3%) and support staff (8.9%)

In the same year, 16,350 people in Alberta were engaged in R&D. Alberta proportions were roughly on par with proportions in Canada—69.4% were researchers, 20.9% were technicians, and 9.7% were support staff. This represented 7.1 % of the Canadian total, a relatively small number compared to Alberta's share of the nation's GDP (16.9% in 2011; $298 billion)[146] and population (11.1% in 2011; $3.8 million).[147] In Alberta about 0.4% of the population is engaged in R&D.

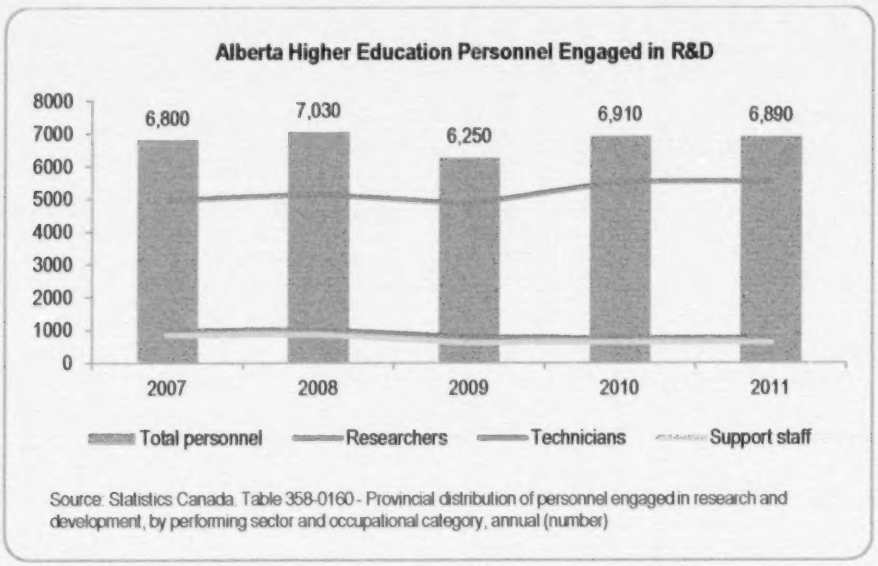


Source: Statistics Canada. Table 358-0160 - Provincial distribution of personnel engaged in research and development, by performing sector and occupational category, annual (number)

Ontario employed the most R&D personnel (102,590), followed by Quebec (68,350), British Columbia (23,430), and Alberta (16,350). There was a slight decline in total personnel engaged in R&D in Canada as a whole although the decline only occurred in New Brunswick, Ontario, Manitoba, and Alberta. Quebec showed the largest increase.

In Canada, about 29.5% of those engaged in R&D are from the higher education sector, second to business enterprises at 61.3%. In Alberta, the distribution is 42.1% from higher education and 48.0% from business enterprises. This information suggests that the higher education sector represents a significant proportion of those engaged in R&D in Alberta. When compared to Ontario, Quebec, and British Columbia, Alberta's higher education sector had the highest proportion of R&D personnel. This may be attributed to the active R&D activities in the advanced learning system in Alberta.

A closer look at the breakdown of personnel engaged in R&D in Alberta shows a minimal decline of 0.3%. On the other hand, Alberta's funded expenditure on R&D has increased, presumably as part of the recovery from the 2008 recession (from $315 million in 2010 to $377 million in 2011). This suggests that while there is an overall increase in expenditure in R&D by the province, this increase did not translate into a growth in R&D personnel in Alberta's advanced learning system. This might be due to rising costs of performing R&D, increased use of technology and/or capital, or increased R&D activities without the commensurate increase in personnel.



Source: Statistics Canada. Table 358-0160 - Provincial distribution of personnel engaged in research and development, by performing sector and occupational category, annual (number)

Alberta's advanced learning system is second only to industry as the largest contributor to R&D in the province (as measured by total expenditure on R&D and personnel engaged in R&D). The number of personnel engaged in R&D in the advanced learning system is one measure of input into the province's R&D activities. Along with other indicators such as bibliometrics and human capital, expenditures on R & D in the advanced learning system and throughout the entire research and innovation system should be tracked and measured. Doing so will highlight the inputs into R&D and the outputs that contribute to overarching outcomes for our province's innovation system.

Talent Attraction

International Education

Profound global changes are transforming societies around the world. Economies are more interdependent; global, environmental, political, and social issues are becoming increasingly complex, and the mobility of labour is a growing phenomenon. These trends have important implications for education and are prompting institutions and governments to consider the educational changes required to respond to these realities. Education systems are focusing increasing attention on developing graduates with the international and intercultural competencies to live and work effectively within this complex and interdependent world, and are implementing a range of internationalization strategies to achieve these outcomes. International education involves the inflow of international students to Canada and Alberta as well as the movement of Alberta students to outside Canada. In addition, the field encompasses elements like collaborative programs between institutions across borders, international projects, and the incorporation of a global perspective into classroom learning.

In 2010, international students in post-secondary institutions in Canada contributed a total of $6.2 billion to the Canadian economy.[148] In addition to this direct influence in the economy, international students' and graduates' also contribute to the economy through research and its commercialization. International student graduates also provide industry with short-term labour supply in the province. The international student post-graduate work permit program encourages and supports application to the Alberta Immigrant Nominee Program (with specialized streams including an international graduate category) and Canadian Experience Class immigration streams, which address industry interest in producing more work-ready graduates. According to the Alberta Graduate Outcomes Survey of the class of 2009–10, 86% of visa students who participated in the survey remained in the province two years following graduation.[149] It should be noted that since the survey is conducted 2 years after graduation, it does not capture longer term retention rates for international students as some are eligible for 3-year post graduation work permits. The transition from study permit to permanent residency is not linear and linking the transitions between these two statuses is currently hampered by data gaps.

The number of international students worldwide more than doubled between 2000 (2.1 million) and 2011 (4.3 million). High demand for higher education worldwide, the perceived value of studying at prestigious post-secondary institutions abroad, government policies that foster student mobility within a geographic region and support students in studying specific fields, and marketing efforts of host countries are all factors that contribute to the rise in student mobility across borders.[150] Students from Asia form the majority (53%) of foreign students in post-secondary education studying outside their home country in the OECD area, with China accounting for 21% of all international students enrolled in OECD countries. Europe accounted for 23% and Africa 12%.[151] The United States was the top destination country in 2011, with 17% share of the market, although USA's share of the market decreased from 23% in 2000. Other top destinations were UK (13%), Germany (6%), France (6%), Australia (6%) and Canada (5%).[152]

The 2013 Canadian Bureau for International Education International Student Survey showed that international students are satisfied with all aspects of their Canadian educational experience. Approximately 91% of students stated that they were overall either satisfied (60%) or very satisfied (31%) with all aspects of

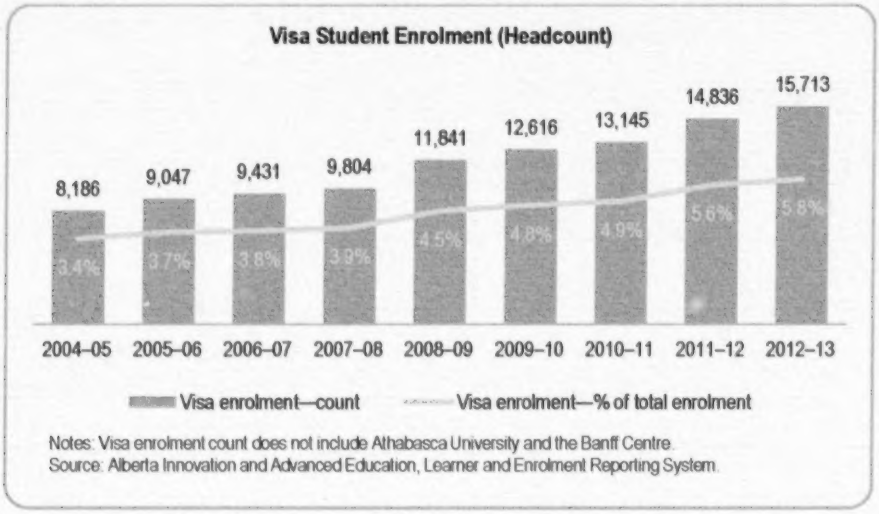
their Canadian experience. The vast majority (96%) of students indicated they would definitely (62%) or probably (34%) recommend Canada as a study destination.[153]

International Students in Alberta

Alberta has the fourth-highest number of international students among the provinces, after Ontario, British Columbia, and Quebec. This is consistent with previous years.[154] Greater financial and strategic investments in international education by Ontario, British Columbia, and Quebec have led to impressive gains in these provinces in recent years. These three systems are much larger than Alberta in terms of total number of institutions and potential capacity.

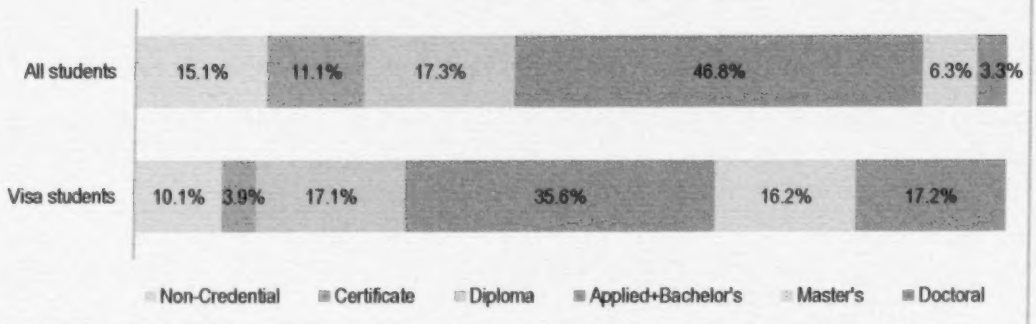
In 2013, China was the single largest source country for post-secondary international students to Alberta, accounting for more than one-quarter of all international students entering Alberta for post-secondary studies. India is the second largest source country for Alberta, with approximately 10% of international students arriving from that country.[155]

In the 2012–13 academic year, a total of 15,713 visa students were enrolled in post-secondary institutions in Alberta (excluding Athabasca University). This represents 5.8% of all students in the post-secondary system in that year. The number of visa students enrolled and their proportion of total enrolment in Alberta's post-secondary institutions have increased over time.



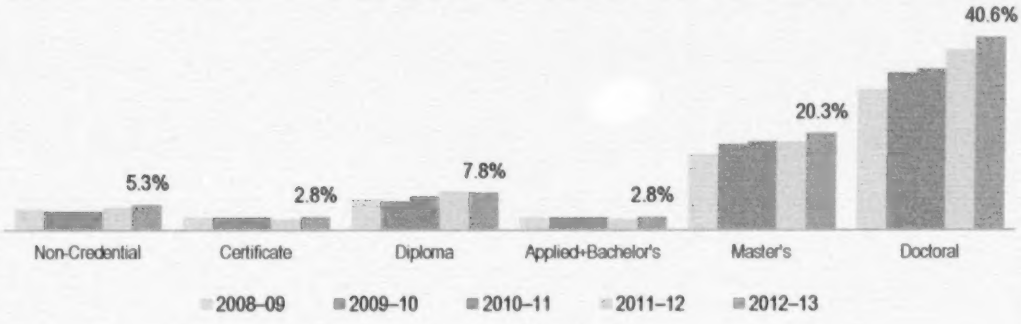
The enrolment data from 2012–13 show that visa students are far more likely to be enrolled in doctoral and master's programs compared to students in general. Enrolment in doctoral (17.2%) and master's (16.2%) programs make up close to one–third of all visa student enrolments, compared to approximately 10% of enrolments among all students. Examining the proportion of visa student enrolment in each of these credential types show that the proportion of visa enrolment in doctoral programs have increased steadily in the past 5 years. In 2012–13, visa student enrolments (FLE) made up 40.6% of all doctoral and 20.3% of all master's enrolments. Examining visa student enrolment by program bands indicates that, compared to non-visa students, visa students are far more likely to be in programs in the Physical, Natural & Applied Sciences program band (38.2% vs. 19.1%).

Visa Student Enrolment by Credentials (FLE), 2012–13



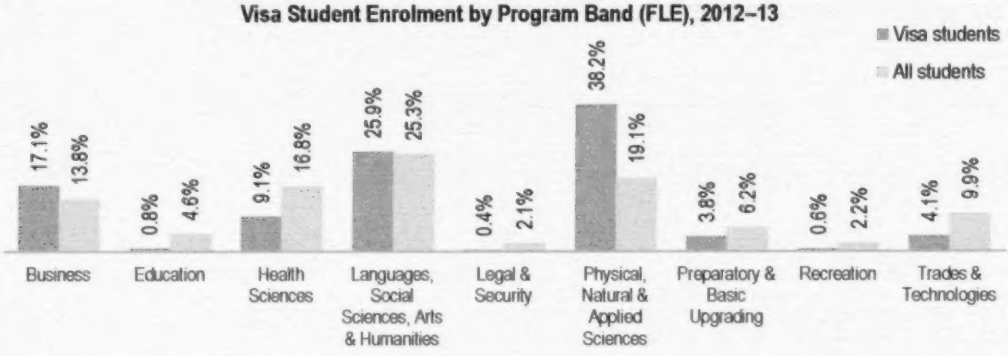
Notes: Data for visa students do not include the Banff Centre and Athabasca University. Percentages may not total 100% due to rounding.
Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

Visa Student Enrolment as a Proportion of Total Enrolment by Credentials (FLE)



Notes: Data for visa students do not include the Banff Centre and Athabasca University.
Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

Visa Student Enrolment by Program Band (FLE), 2012–13



Notes: Data for visa students do not include the Banff Centre and Athabasca University. Percentages may not total 100% due to rounding.
Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

As noted above, in Alberta, international students make up a significant proportion of the graduate student population—those students enrolled in master's and doctoral degree programs. Currently there is no good estimate of the valuation of the research and entrepreneurial activity done by international students and recent international student graduates, which is an important data gap. At the graduate level, it is assumed that due to the high proportion of international students, they are contributing significantly to the economic output from research and research commercialization.

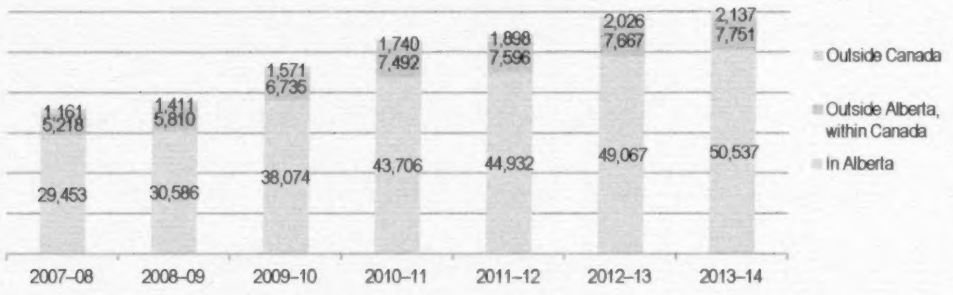
Albertans Studying Abroad

While global competition for international students is growing, so is the demand for international educational experiences and Alberta's support for increasing the number of Albertans who participate in education abroad programs. The UNESCO Institute for Statistics estimates that 45,090 Canadian students studied abroad in 2010. About 62% of Canadian students studying abroad do so in the U.S.[156]

The most recent Alberta Graduates Outcomes Survey for the class of 2009–10 indicates that 10% of students from the Comprehensive Academic and Research Institutions have participated in a study abroad program compared to 2% to 5% for the other sectors. Study abroad participation is higher at the applied and bachelor degree level (10%) than in other program types (1% to 8%). Students in the languages, social sciences, arts and humanities are the most active participants at 12%.[157]

While there is currently no direct mechanism to track Albertans who choose to study outside the province, some indication of the number of Albertans leaving the province to study can be obtained from student financial assistance data. Students must indicate the institution they will attend on their *Student Aid Alberta* application form. The proportions of *Student Aid Alberta* recipients studying outside the province and abroad are used as a proxy for the overall proportion of Albertans who leave the province to study. In 2012–13, about 84% of *Student Aid Alberta* recipients remained in the province to study, and about 13% (7,751 students) studied elsewhere in Canada. A total of 2,137 *Student Aid Alberta* recipients (about 4%) studied abroad. These proportions are similar to previous years.

Study Location of Albertans Receiving Student Financial Assistance



Notes: Includes only those students receiving *Student Aid Alberta* assistance in the reporting year.
Source: Alberta Innovation and Advanced Education, Student Finance.

APPENDICES

Appendix A: Methodological Notes

A1. Geographic Service Regions

Service regions are defined areas of the province that provide a framework for better understanding local factors relating to learning and programming at a regional level. In consultation with stakeholders, regional boundaries were drawn based on dissemination area (DA) boundaries and the area generally served by Comprehensive Community Institutions (CCIs). Regional boundaries for CCIs are meant to approximate general service regions and act as guidelines for planning purposes. CCIs align with service regions in order to enhance strategic planning, achieve access goals, and strengthen partnerships and collaboration. Because it focuses on distance delivery, Athabasca University is not allocated to any particular service region. As a result of boundary changes, regional data presented in this edition of CAPR may not reconcile with that presented in previous iterations.

A2. Population Projections

At the Alberta and Census Division (CD) level, projected population data are sourced from Alberta Treasury Board and Finance. The base population for these projections is Statistics Canada's July 1, 2013 postcensal estimate. This estimate is based on the 2011 Census of Population adjusted for net under coverage and incompletely enumerated Indian reserves. The population estimates, as well as the projections, include only the resident population, as defined by the census. Hence, an individual must be usually living in an area to be considered a resident. Usual residents include non-permanent residents (NPRs), but not 'shadow' populations, since these people have a usual residence elsewhere and are enumerated by Statistics Canada in the census as residents of other jurisdictions.

Alberta is composed of 19 Census Divisions (CDs), each containing a number of smaller Dissemination Blocks (DBs). Data is available by DB for census years and by CD for non-census years. Alberta Treasury Board and Finance produces three population projections by CD using low-, medium-, and high-growth scenarios. Data presented here are sourced from the medium-growth scenario, which represents the most likely case. The component projection approach takes the base population categorized by age and by sex, and applies fertility rates, mortality rates, and migration to project the number of births, deaths, and migrants per year. These three components are either added or subtracted from the base population to obtain the projected population for the subsequent years. Provincial-level population projections are derived by summing the CD-level projections.[158]

Population forecasts by service region are derived separately from the provincial forecast. Unlike CDs, DBs fit neatly into geographic service region boundaries. Since DB-level data are only available in census years, each CD is weighted according to the proportion of its population falling in a particular service region and matched to the DBs within that region.

For example, the Medicine Hat region includes parts of three CDs (100% of CD1, 15% of CD2, and 34% of CD4). To derive the Medicine Hat region's population from these three CDs, the population of CD1 is multiplied by 1 because it contains 100% of that CD. The population of CD2 is multiplied by 0.15, and the population of CD4 by 0.34. The three derived figures are then summed to determine the overall regional population. These calculations are then forecasted forward using Alberta Treasury Board and Finance's medium-term growth scenario.

A3. Program Bands

Program bands are based on the Classification of Instructional Programs (CIP) 2011 categories. CIP 2011 is designed to classify instructional programs; and aims to provide a sound basis for grouping similar types of programs and support the accurate tracking, monitoring, and evaluation of programs and completions. Program bands are designed to make data analysis and the communication and presentation of data easier by categorizing CIP 2011 into nine higher-level groupings.

In collaboration with Statistics Canada, IAE reviewed CIP 2011 codes for all programs and specializations. Some programs and specializations' CIP codes were revised to more accurately reflect academic content. As a result of this review, some codes have been adjusted. Data provided at the CIP code or program band level may not reconcile with data presented in previous iterations.

Program Band	CIP 2011	Program Band	CIP 2011
Business	Business, management, marketing and related support services	Legal & Security	Legal professions and studies Security and protective services
Education	Education	Trades & Technologies	Personal and culinary services Engineering technologies and engineering-related fields Science technologies/technicians Construction trades Mechanic and repair technologies/technicians Precision production Transportation and materials moving
Health Sciences	Health-related knowledge and skills (not for credit) Psychology Health professions and related programs Dental, medical and veterinary residency programs		
Languages, Social Sciences, Arts & Humanities	Area, ethnic, cultural, gender, and group studies Communication, journalism and related programs Aboriginal and foreign languages, literatures and linguistics Family and consumer sciences/human sciences English language and literature/letters Liberal arts and sciences, general studies and humanities Library science Philosophy and religious studies Theology and religious vocations Public administration and social service professions Social sciences Visual and performing arts History French language and literature/letters	Physical, Natural & Applied Sciences	Agriculture, agriculture operations and related sciences Natural resources and conservation Architecture and related services Communications technologies/technicians and support services Computer and information sciences and support services Engineering Biological and biomedical sciences Mathematics and statistics Military science, leadership and operational art Military Technologies Multidisciplinary/interdisciplinary studies Physical sciences
Recreation	Parks, recreation, leisure and fitness studies Citizenship activities (not for credit) Leisure and recreational activities (not for credit) Personal awareness and self-improvement (not for credit)	Preparatory & Basic Upgrading	Pre-technology education/pre-industrial arts programs Basic skills (not for credit) Interpersonal and social skills (not for credit) High school/secondary diploma and certificate programs

A4. Enrolment

Headcount Enrolment

The unduplicated (unique) student headcount measure is a method of counting enrolment that refers to the actual number of unique students registered at and attending a publicly funded post-secondary institution in Alberta (full- and part-time) in a given academic year.

To address the issue of double counting, the unduplicated student headcount methodology uses the Alberta Student Number (ASN), rather than the institutional student identification number, as the means of identifying students. For the past decade, institutions have used the ASN to report enrolment data to IAE via LERS. All students in Alberta should be assigned a unique ASN that travels with them, regardless of the post-secondary institutions they attend through the course of their life. As a unique identifier that travels with the learner, the ASN enables analyses that removes duplicate student counts among institutions.

In some cases, students are not assigned an ASN. For those student records without an ASN, institution-specific values were used. Because the methodology removes double counting, subtotals and system values for this measure will not be equal to the sum of the corresponding institutional totals, as a student may have attended more than one institution. In other words, it will not be possible to add up institutional totals to arrive at a summary value, as adding each institutional total may lead to double counting. The value listed for each institution represents the unique headcount at that particular institution, while the value listed for the system total represents the number of unique headcount across the whole system.

Banff Centre Enrolments

In 2009–10, the Banff Centre began reporting enrolments using an updated full-load equivalent (FLE) calculation. Factors used for calculating FLE enrolment were reviewed and adjusted for the 2009–10 academic year forward. This adjustment resulted in a significantly higher FLE in 2009–10, independent of enrolments.

Apprenticeship Data

At a system level, registered apprentices are included in all enrolment data. Due to the nature of apprenticeship programs, where 80% of the training is provided on the job and 20% is technical training provided in class, only the in-class component is included in the LERS enrolment data. There are also differences in how apprenticeship technical training enrolments are reflected as headcounts compared to FLEs. In terms of headcount enrolment data, apprentices are counted in the same way as everyone else (one person equals one count). In terms of FLE data, one FLE roughly equates to just over four students enrolled in apprenticeship programming.

While included in enrolment data, apprentices who complete their trade program and receive a journeyperson certificate are not included in LERS graduate data. This is because, unlike other post-secondary programs where the respective post-secondary institution awards the credential, apprentices receive their certification from Apprenticeship and Industry Training, IAE. Data on graduates from the Trades and Technology program band includes only those graduates from technology and technician programs, and excludes journeypersons. Data on registered apprentices is tracked using the Apprenticeship, Trade, and Occupational Management System (ATOMS).

Appendix B: Data Tables

B1. High School Transitions By Service Region

Region of High School Graduation	Region of Post-Secondary Transition													
Fall 2013	Calgary	Central	Edmonton	Grande Prairie	Keyano	Lakeland	Lethbridge	Medicine Hat	Northern Lakes	Portage	Athabasca University	Total (With AU)	Did not attend PSE in Alberta	Total Graduates
Calgary	3,485	59	307	6	5	4	331	10	1	0	6	4,214	6,368	10,582
	83%	9%	7%	2%	5%	4%	34%	4%	4%	0%	55%	37%	33%	35%
Central	143	445	159	3	1	8	77	6	3	3	0	848	1,838	2,686
	3%	68%	3%	1%	1%	7%	8%	3%	13%	6%	0%	8%	10%	9%
Edmonton	399	75	3,742	29	6	28	78	14	3	6	3	4,383	7,361	11,744
	10%	12%	81%	11%	6%	25%	8%	6%	13%	12%	27%	39%	38%	38%
Grande Prairie	13	9	84	187	0	5	7	0	3	0	1	309	762	1,071
	0%	1%	2%	73%	0%	4%	1%	0%	13%	0%	9%	3%	4%	4%
Keyano	26	3	46	0	84	0	3	0	0	0	0	162	306	468
	1%	0%	1%	0%	88%	0%	0%	0%	0%	0%	0%	1%	2%	2%
Lakeland	7	21	70	0	0	45	6	5	0	0	0	154	279	433
	0%	3%	2%	0%	0%	39%	1%	2%	0%	0%	0%	1%	1%	1%
Lethbridge	56	11	28	2	0	2	416	13	0	1	1	530	974	1,504
	1%	2%	1%	1%	0%	2%	42%	5%	0%	2%	9%	5%	5%	5%
Medicine Hat	51	7	23	2	0	2	61	191	0	0	0	337	541	878
	1%	1%	0%	1%	0%	2%	6%	80%	0%	0%	0%	3%	3%	3%
Northern Lakes	3	8	70	28	0	4	4	0	13	1	0	131	408	539
	0%	1%	2%	11%	0%	4%	0%	0%	57%	2%	0%	1%	2%	2%
Portage	10	12	118	0	0	16	3	0	0	40	0	199	464	663
	0%	2%	3%	0%	0%	14%	0%	0%	0%	78%	0%	2%	2%	2%
Alberta	4,193	650	4,647	257	96	114	986	239	23	51	11	11,267	19,301	30,568
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Notes:
1. The number of high school graduates transitioning directly to post-secondary institutions in fall 2013 may be understated, as these only represent a snapshot of fall enrolments and may not include all enrolments in fall.
2. In occurrences where High School graduates were attending more than one post-secondary institution, the student is only counted at one institution.
3. High school graduates are those learners who graduated from an Alberta high school in June 2013.
4. Table does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education, Application Submission Initiative.

B2. Number of Applicants

Institution	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Athabasca University	16,905	20,850	22,639	22,203	22,316
University of Alberta	33,097	34,485	35,459	37,780	39,025
University of Calgary	25,878	26,233	27,313	29,171	30,860
University of Lethbridge	6,102	6,044	6,105	6,013	5,581
Comprehensive Academic and Research Institutions	**75,829**	**80,859**	**84,381**	**87,307**	**88,936**
Grant MacEwan University	14,652	14,721	15,397	14,945	15,087
Mount Royal University	13,551	13,628	13,230	13,797	13,345
Baccalaureate and Applied Studies Institutions	**27,905**	**28,035**	**28,268**	**28,384**	**27,977**
Northern Alberta Institute of Technology	11,604	12,379	12,904	13,146	12,241
Southern Alberta Institute of Technology	12,627	12,883	13,696	14,938	17,197
Polytechnical Institutions	**23,602**	**24,547**	**25,758**	**27,125**	**28,234**
Bow Valley College	4,360	4,980	4,907	4,896	5,161
Grande Prairie Regional College	2,554	2,452	2,601	2,395	2,317
Keyano College	1,027	750	982	871	967
Lakeland College	1,869	2,275	2,096	2,204	2,012
Lethbridge College	3,719	3,874	3,892	3,431	3,565
Medicine Hat College	2,556	2,466	2,305	2,420	2,343
NorQuest College	3,546	4,027	3,423	3,621	3,479
Northern Lakes College	1,485	1,652	1,660	1,660	2,173
Olds College	1,511	1,786	1,697	1,530	1,253
Portage College	1,979	1,843	1,562	1,366	1,589
Red Deer College	5,032	4,529	4,494	4,372	4,389
Comprehensive Community Institutions	**28,584**	**29,543**	**28,452**	**27,551**	**27,750**
Ambrose University College	296	307	339	276	389
Canadian University College	240	279	328	171	278
Concordia University College of Alberta	1,422	1,278	1,210	1,005	1,126
King's University College, The	587	486	521	555	505
St. Mary's University College	366	405	414	421	527
Independent Academic Institutions	**2,840**	**2695**	**2742**	**2363**	**2735**
Alberta College of Art and Design	1,000	911	847	839	938
Specialized Arts and Culture Institutions	**1,000**	**911**	**847**	**839**	**938**
TOTAL	145,341	151,358	154,223	156,426	157,316

Notes:
1. In September 2009 the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2. Table does not include data for the Banff Centre.
3. The sum of the rows will not equal the sector or system totals, as students may have applied to more than one institution.
4. In 2010, all apprenticeship records were removed from ASI. All historical values have been restated to reflect this change.
Source: Alberta Innovation and Advanced Education, Application Submission Initiative (ASI).

B3. Applicants by Region

Region	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Calgary	39,555	42,456	42,037	42,323	42,790
Central	6,948	7,083	7,007	6,866	6,467
Edmonton	37,822	38,695	38,284	36,419	34,863
Grande Prairie	2,561	2,669	2,804	2,610	2,352
Keyano	1,589	1,584	1,782	1,665	1,761
Lakeland	1,308	1,462	1,465	1,452	1,311
Lethbridge	4,659	4,703	4,678	4,509	4,344
Medicine Hat	2,620	2,665	2,542	2,454	2,291
Northern Lakes	2,452	2,542	2,546	2,334	2,775
Portage	2,344	2,405	2,241	2,063	2,118
Alberta - Unknown	447	747	1,204	2,027	3,224
Alberta (Total)	**101,640**	**106,290**	**105,932**	**104,013**	**103,483**
British Columbia	7,703	8,429	9,009	9,604	10,224
Manitoba	1,377	1,438	1,562	1,575	1,689
New Brunswick	492	569	660	597	614
Newfoundland	371	431	465	451	502
Northwest Territories	831	902	961	932	921
Nova Scotia	1,019	1,250	1,229	1,274	1,335
Nunavut & Yukon	267	343	295	278	297
Ontario	10,467	12,398	12,894	12,847	13,146
Prince Edward Island	171	177	191	213	203
Quebec	689	741	807	922	967
Saskatchewan	4,028	4,334	4,322	4,318	4,249
Canada - Unknown	5,958	1,039	1,223	2,762	1,691
Other Provinces (Total)	**33,040**	**31,997**	**33,570**	**35,678**	**35,767**
Outside of Canada	12,595	13,543	15,167	17,808	19,194
Other (Not valid Canadian Postal Code)	678	764	927	800	920
TOTAL	145,341	151,358	154,223	156,426	157,316

Notes:
1. In September 2009 the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2. Table does not include data for the Banff Centre.
3. The sum of the rows will not equal the system total, as students may have applied to more than one institution/region.
4. In 2010, all apprenticeship records were removed from ASI. All historical values have been restated to reflect this change.
5. In 2012, Service Regions were updated to reflect changes to unknown service regions. Due to this update, values for years Fall 2005 to Fall 2010 have been restated to ensure consistent measures.

Source: Alberta Innovation and Advanced Education, Application Submission Initiative (ASI).

B4. Applicants from Alberta by Region, Fall 2013

WHERE STUDENTS ARE APPLYING FROM	WHERE STUDENTS ARE APPLYING TO: Calgary	Central	Edmonton	Grande Prairie	Keyano	Lakeland	Lethbridge	Medicine Hat	Northern Lakes	Portage	Athabasca University	Total
Calgary	36,504 85.3%	698 1.6%	4,367 10.2%	44 0.1%	16 0.0%	67 0.2%	2,287 5.3%	158 0.4%	17 0.0%	31 0.1%	3,429 8.0%	42,790 100.0%
Central	1,765 27.3%	3,000 46.4%	1,820 28.1%	34 0.5%	5 0.1%	87 1.3%	444 6.9%	75 1.2%	17 0.3%	18 0.3%	454 7.0%	6,467 100.0%
Edmonton	2,543 7.3%	557 1.6%	30,102 86.3%	180 0.5%	11 0.0%	242 0.7%	367 1.1%	58 0.2%	116 0.3%	179 0.5%	2,633 7.6%	34,863 100.0%
Grande Prairie	262 11.1%	72 3.1%	710 30.2%	1,141 48.5%	0 0.0%	22 0.9%	61 2.6%	6 0.3%	203 8.6%	18 0.8%	236 10.0%	2,352 100.0%
Keyano	272 15.4%	32 1.8%	549 31.2%	10 0.6%	818 46.5%	9 0.5%	42 2.4%	10 0.6%	13 0.7%	38 2.2%	205 11.6%	1,761 100.0%
Lakeland	180 13.7%	124 9.5%	606 46.2%	7 0.5%	2 0.2%	440 33.6%	44 3.4%	10 0.8%	0 0.0%	27 2.1%	118 9.0%	1,311 100.0%
Lethbridge	825 19.0%	88 2.0%	503 11.6%	10 0.2%	0 0.0%	30 0.7%	3,015 69.4%	72 1.7%	2 0.0%	15 0.3%	266 6.1%	4,344 100.0%
Medicine Hat	583 25.4%	70 3.1%	371 16.2%	7 0.3%	1 0.0%	16 0.7%	363 15.8%	1,120 48.9%	3 0.1%	6 0.3%	194 8.5%	2,291 100.0%
Northern Lakes	126 4.5%	71 2.6%	628 22.6%	176 6.3%	2 0.1%	22 0.8%	35 1.3%	10 0.4%	1,686 60.8%	120 4.3%	183 6.6%	2,775 100.0%
Portage	184 8.7%	73 3.4%	840 39.7%	10 0.5%	0 0.0%	149 7.0%	38 1.8%	9 0.4%	32 1.5%	933 44.1%	156 7.4%	2,118 100.0%
Alberta - Unknown	1,188 36.8%	125 3.9%	1,276 39.6%	100 3.1%	82 2.5%	44 1.4%	157 4.9%	52 1.6%	20 0.6%	28 0.9%	432 13.4%	3,224 100.0%
Alberta (TOTAL)	44,313 42.8%	4,910 4.7%	41,575 40.2%	1,719 1.7%	937 0.9%	1,128 1.1%	6,844 6.6%	1,580 1.5%	2,109 2.0%	1,413 1.4%	8,306 8.0%	103,483 100.0%

Notes:
1. In September 2009 the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2. Table does not include data for the Banff Centre.
3. The sum of the rows/columns will not equal the total, as students may have applied to more than one region.
4. In 2010, all apprenticeship records were removed from ASI. All historical values have been restated to reflect this change.
5. In 2012, Service Regions were updated to reflect changes to unknown service regions. Due to this update, values for years Fall 2005 to Fall 2010 have been restated to ensure consistent measures.

Source: Alberta Innovation and Advanced Education, Application Submission Initiative (ASI).

B5. Applicants from Outside Alberta by Region, Fall 2013

WHERE STUDENTS ARE APPLYING FROM	WHERE STUDENTS ARE APPLYING TO: Calgary	Central	Edmonton	Grande Prairie	Keyano	Lakeland	Lethbridge	Medicine Hat	Northern Lakes	Portage	Athabasca University	Total
British Columbia	4,379 42.8%	234 2.3%	4,108 40.2%	245 2.4%	3 0.0%	60 0.6%	404 4.0%	44 0.4%	18 0.2%	28 0.3%	1,925 18.8%	10,224 100.0%
Manitoba	430 25.5%	51 3.0%	493 29.2%	7 0.4%	0 0.0%	56 3.3%	70 4.1%	16 0.9%	3 0.2%	7 0.4%	650 38.5%	1,689 100.0%
New Brunswick	138 22.5%	15 2.4%	120 19.5%	6 1.0%	1 0.2%	3 0.5%	9 1.5%	7 1.1%	2 0.3%	2 0.3%	338 55.0%	614 100.0%
Newfoundland	103 20.5%	6 1.2%	138 27.5%	4 0.8%	1 0.2%	4 0.8%	12 2.4%	1 0.2%	2 0.4%	4 0.8%	242 48.2%	502 100.0%
Northwest Territories	182 19.8%	55 6.0%	416 45.2%	196 21.3%	1 0.1%	6 0.7%	79 8.6%	8 0.9%	5 0.5%	9 1.0%	160 17.4%	921 100.0%
Nova Scotia	300 22.5%	16 1.2%	283 21.2%	6 0.4%	3 0.2%	7 0.5%	25 1.9%	7 0.5%	5 0.4%	5 0.4%	720 53.9%	1,335 100.0%
Nunavut & Yukon	105 35.4%	16 5.4%	93 31.3%	16 5.4%	1 0.3%	4 1.3%	25 8.4%	3 1.0%	0 0.0%	4 1.3%	68 22.9%	297 100.0%
Ontario	2,958 22.5%	191 1.5%	2,651 20.2%	30 0.2%	3 0.0%	35 0.3%	180 1.4%	46 0.3%	9 0.1%	21 0.2%	7,799 59.3%	13,146 100.0%
Prince Edward Island	48 23.6%	7 3.4%	51 25.1%	1 0.5%	1 0.5%	0 0.0%	6 3.0%	1 0.5%	0 0.0%	1 0.5%	92 45.3%	203 100.0%
Quebec	243 25.1%	12 1.2%	296 30.6%	6 0.6%	0 0.0%	3 0.3%	16 1.7%	5 0.5%	1 0.1%	4 0.4%	442 45.7%	967 100.0%
Saskatchewan	1,039 24.5%	172 4.0%	1,123 26.4%	14 0.3%	4 0.1%	631 14.9%	348 8.2%	311 7.3%	4 0.1%	78 1.8%	1,008 23.7%	4,249 100.0%
Canada – Unknown	215 12.7%	30 1.8%	1,241 73.4%	17 1.0%	10 0.6%	8 0.5%	35 2.1%	0 0.0%	1 0.1%	1 0.1%	137 8.1%	1,691 100.0%
TOTAL – Other Provinces	10,137 28.3%	805 2.3%	11,007 30.8%	548 1.5%	28 0.1%	817 2.3%	1,209 3.4%	449 1.3%	50 0.1%	164 0.5%	13,581 38.0%	**35,767** **100.0%**
Outside Canada	**6,068** **31.6%**	**96** **0.5%**	**12,697** **66.2%**	**45** **0.2%**	**0** **0.0%**	**62** **0.3%**	**602** **3.1%**	**314** **1.6%**	**13** **0.1%**	**10** **0.1%**	**429** **2.2%**	**19,194** **100.0%**
Other/Unknown/Not Reported	**517** **56.2%**	**57** **6.2%**	**327** **35.5%**	**5** **0.5%**	**2** **0.2%**	**5** **0.5%**	**52** **5.7%**	**0** **0.0%**	**1** **0.1%**	**2** **0.2%**	**0** **0.0%**	**920** **100.0%**

Notes:
1. In September 2009 the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2. Table does not include data for the Banff Centre.
3. The sum of the rows/columns will not equal the total, as students may have applied to more than one region.
4. In 2010, all apprenticeship records were removed from ASI. All historical values have been restated to reflect this change.
5. In 2012, Service Regions were updated to reflect changes to unknown service regions. Due to this update, values for years Fall 2005 to Fall 2010 have been restated to ensure consistent measures.

Source: Alberta Innovation and Advanced Education, Application Submission Initiative (ASI).

B6. Applicant Data – Sector Summaries by Program Bands

Sector	Program band	Applicants	Qualified	Offered Admission	Acceptance Rate	Attending Program	Conversion Rate
CARI	Business	11,270	7,573	6,700	88.5%	3,676	54.9%
	Education	4,989	3,151	2,797	88.8%	2,057	73.5%
	Health Sciences	18,013	11,681	7,748	66.3%	4,611	59.5%
	Languages, Social Sciences, Arts & Humanities	39,051	31,142	30,273	97.2%	13,835	45.7%
	Legal & Security	2,987	1,573	959	61.0%	501	52.2%
	Physical, Natural & Applied Sciences	28,703	16,757	13,577	81.0%	9,652	71.1%
	Recreation	2,851	1,746	1,231	70.5%	918	74.6%
	Comprehensive Academic and Research Institutions	**88,936**	**68,121**	**61,069**	**89.6%**	**34,851**	**57.1%**
BASI	Business	4,822	3,085	2,334	75.7%	1,463	62.7%
	Education	1,183	820	285	34.8%	208	73.0%
	Health Sciences	5,756	3,465	1,756	50.7%	1,331	75.8%
	Languages, Social Sciences, Arts & Humanities	17,275	13,019	11,765	90.4%	6,898	58.6%
	Legal & Security	991	425	353	83.1%	300	85.0%
	Physical, Natural & Applied Sciences	1,544	892	553	62.0%	355	64.2%
	Preparatory & Basic Upgrading	1,433	1,278	1,278	100.0%	764	59.8%
	Recreation	996	578	403	69.7%	234	58.1%
	Trades & Technologies	136	41	41	100.0%	19	46.3%
	Baccalaureate and Applied Studies Institutions	**27,977**	**20,837**	**18,006**	**86.4%**	**11,572**	**64.3%**
PI	Business	5,205	3,826	3,403	88.9%	2,114	62.1%
	Health Sciences	5,729	4,383	1,923	43.9%	1,451	75.5%
	Languages, Social Sciences, Arts & Humanities	2,457	1,872	1,140	60.9%	835	73.2%
	Legal & Security	511	428	292	68.2%	180	61.6%
	Physical, Natural & Applied Sciences	2,791	2,211	1,392	63.0%	920	66.1%
	Preparatory & Basic Upgrading	1,364	1,209	1,138	94.1%	690	60.6%
	Recreation	218	177	105	59.3%	84	80.0%
	Trades & Technologies	13,877	10,487	5,257	50.1%	3,544	67.4%
	Polytechnical Institutions	**28,234**	**22,230**	**14,208**	**63.9%**	**9,818**	**69.1%**
CCI	Business	3,588	2,931	2,868	97.9%	1,898	66.2%
	Education	1,014	892	885	99.2%	564	63.7%
	Health Sciences	7,519	5,426	4,356	80.3%	2,694	61.8%
	Languages, Social Sciences, Arts & Humanities	6,043	5,267	5,130	97.4%	3,312	64.6%
	Legal & Security	1,017	892	847	95.0%	561	66.2%
	Physical, Natural & Applied Sciences	2,160	1,774	1,579	89.0%	1,182	74.9%
	Preparatory & Basic Upgrading	6,516	5,813	5,255	90.4%	3,463	65.9%
	Recreation	498	423	404	95.5%	249	61.6%
	Trades & Technologies	2,204	1,840	1,601	87.0%	831	51.9%
	Comprehensive Community Institutions	**27,750**	**23,698**	**21,694**	**91.5%**	**14,730**	**67.9%**
IAI	Business	231	122	119	97.5%	82	68.9%
	Education	296	215	214	99.5%	193	90.2%
	Health Sciences	385	265	264	99.6%	194	73.5%
	Languages, Social Sciences, Arts & Humanities	1,268	981	971	99.0%	694	71.5%
	Physical, Natural & Applied Sciences	712	439	436	99.3%	325	74.5%
	Recreation	6	2	2	100.0%	1	50.0%
	Independent Academic	**2,735**	**2,010**	**1,993**	**99.2%**	**1,489**	**74.7%**
SACI	Languages, Social Sciences, Arts & Humanities	938	722	645	89.3%	454	70.4%
	Specialized Arts & Culture Institutions	**938**	**722**	**645**	**89.3%**	**454**	**70.4%**
All Sectors		157,316	126,208	110,766	87.8%	72,642	65.6%

Notes: 1. The sum of the rows will not equal the total, as students may have applied to more than one sector/program band.
2. In 2010, all apprenticeship records were removed from ASI. All historical values have been restated to reflect this change.
3. Table does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education, Application Submission Initiative (ASI).

B7. Student Enrollment (FLE's)

Institutions	2008–09	2009–10	2010–11	2011–12	2012–13
Athabasca University	7,525.9	7,701.3	7,892.1	7,874.8	8,267.9
University of Alberta	32,844.0	33,886.1	34,553.7	34,588.8	36,299.0
University of Calgary	24,383.6	26,024.8	26,859.3	27,721.8	28,341.0
University of Lethbridge	6,688.7	6,911.1	7,049.7	6,893.6	6,771.6
Comprehensive Academic and Research Institutions	71,442.3	74,523.3	76,354.8	77,079.0	79,679.6
Grant MacEwan University	10,220.9	11,156.7	11,742.4	11,465.2	11,838.2
Mount Royal University	8,956.0	9,670.6	9,994.1	10,030.1	9,837.4
Baccalaureate and Applied Studies Institutions	19,176.9	20,827.3	21,736.5	21,495.2	21,675.6
Northern Alberta Institute of Technology	13,582.9	13,185.6	13,493.5	13,077.7	13,245.9
Southern Alberta Institute of Technology	11,818.4	11,645.8	11,860.8	11,987.2	12,494.3
Polytechnical Institutions	25,401.3	24,831.4	25,354.3	25,064.9	25,740.3
Bow Valley College	3,825.0	4,463.8	4,492.5	4,825.3	5,123.7
Grande Prairie Regional College	1,289.8	2,069.3	2,013.8	1,929.1	1,953.4
Keyano College	1,212.4	1,353.1	1,414.7	1,331.3	1,343.9
Lakeland College	2,051.1	2,098.8	2,249.8	2,215.9	2,302.6
Lethbridge College	3,815.2	4,123.3	3,972.4	4,177.2	3,933.7
Medicine Hat College	2,312.6	2,537.4	2,547.5	2,482.1	2,422.4
NorQuest College	5,084.4	5,680.7	4,515.2	4,086.0	3,884.2
Northern Lakes College	1,020.2	1,059.6	1,088.1	1,128.1	1,250.5
Olds College	1,270.9	1,294.5	1,258.2	1,285.7	1,294.3
Portage College	979.6	1,099.3	989.9	1,005.7	958.0
Red Deer College	3,730.2	4,001.6	3,940.9	3,628.2	3,488.3
Comprehensive Community Institutions	26,591.6	29,781.2	28,483.0	28,094.7	27,955.0
Ambrose University College	303.4	345.8	370.6	417.1	449.1
Canadian University College	284.7	333.0	409.9	452.2	515.0
Concordia University College of Alberta	1,297.8	1,336.8	1,301.3	1,241.8	1,195.5
King's University College, The	504.3	560.1	557.5	549.3	549.2
St. Mary's University College	337.2	378.5	404.0	442.4	437.4
Taylor University College and Seminary	115.3	0.0	0.0	0.0	0.0
Independent Academic Institutions	2,842.8	2,954.1	3,043.3	3,102.7	3,146.2
Alberta College of Art and Design	985.0	999.2	1,003.4	996.0	957.9
Specialized Arts and Culture Institutions	985.0	999.2	1,003.4	996.0	957.9
TOTAL	146,439.8	153,916.5	155,975.2	155,832.5	159,154.4

Notes:
1. In September 2009 the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2. As of June 30, 2009, Taylor University College and Seminary became Taylor College and Seminary and ceased offering undergraduate academic baccalaureate programs, meaning no enrolments will be reported as of 2009-10.
3. Table does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

B8. Student Enrollment (Headcount)

Institutions	2008–09	2009–10	2010–11	2011–12	2012–13
Athabasca University	38,543	38,333	38,938	39,284	41,223
University of Alberta	40,245	41,331	41,988	42,344	43,013
University of Calgary	30,761	32,533	33,230	34,144	34,474
University of Lethbridge	8,771	9,108	9,306	9,340	9,114
Comprehensive Academic and Research Institutions	**116,303**	**119,233**	**121,221**	**122,833**	**125,593**
Grant MacEwan University	17,671	18,379	19,143	18,862	18,897
Mount Royal University	15,187	16,121	15,968	15,612	15,168
Baccalaureate and Applied Studies Institutions	**32,836**	**34,482**	**35,083**	**34,461**	**34,000**
Northern Alberta Institute of Technology	29,455	27,545	27,873	26,570	27,182
Southern Alberta Institute of Technology	28,632	26,427	25,600	25,844	26,815
Polytechnical Institutions	**58,005**	**53,904**	**53,403**	**52,363**	**53,934**
Bow Valley College	8,229	8,599	8,831	9,583	10,727
Grande Prairie Regional College	2,249	3,965	3,800	3,822	3,911
Keyano College	2,658	2,866	2,932	2,869	2,950
Lakeland College	7,713	7,386	7,925	7,396	7,527
Lethbridge College	6,434	6,617	6,512	6,503	6,303
Medicine Hat College	5,255	5,250	5,408	5,425	4,126
NorQuest College	7,408	8,398	7,444	6,819	6,722
Northern Lakes College	1,734	1,709	1,752	1,933	2,201
Olds College	2,761	2,464	2,428	2,465	2,573
Portage College	3,061	2,974	3,585	3,360	3,463
Red Deer College	7,269	7,300	7,031	6,595	6,456
Comprehensive Community Institutions	**53,914**	**56,735**	**56,765**	**55,978**	**56,196**
Ambrose University College	477	575	581	624	605
Canadian University College	440	476	567	613	621
Concordia University College of Alberta	1,787	1,878	1,774	1,677	1,613
King's University College, The	678	731	717	713	705
St. Mary's University College	509	572	627	655	641
Taylor University College and Seminary	158	0	0	0	0
Independent Academic Institutions	**4,034**	**4,216**	**4,259**	**4,273**	**4,178**
Alberta College of Art and Design	1,324	1,319	1,314	1,323	1,250
Specialized Arts and Culture Institutions	**1,324**	**1,319**	**1,314**	**1,323**	**1,250**
TOTAL	260,267	264,106	266,340	265,501	269,750

Notes:
1. In September 2009 the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2. As of June 30, 2009, Taylor University College and Seminary became Taylor College and Seminary and ceased offering undergraduate academic baccalaureate programs, meaning no enrolments will be reported as of 2009-10.
3. Table does not include data for the Banff Centre.
4. The headcounts reported above are true headcounts, where students are counted once for each institution / academic year.
Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

B9. Aboriginal Student Enrolment (Headcount)

Institution	2008–09		2009–10		2010–11		2011–12		2012–13	
	Aboriginal enrolment	% of total enrolment	Aboriginal enrolment	% of total enrolment	Aboriginal enrolment	% of total enrolment	Aboriginal enrolment	% of total enrolment	Aboriginal enrolment	% of total enrolment
Athabasca University	991	2.6%	931	2.4%	1,017	2.6%	1,080	2.7%	1,188	2.9%
University of Alberta	1,197	3.0%	816	2.0%	1,131	2.7%	1,154	2.7%	1,234	2.9%
University of Calgary	433	1.4%	508	1.6%	582	1.8%	638	1.9%	656	1.9%
University of Lethbridge	443	5.1%	450	4.9%	469	5.0%	465	5.0%	431	4.7%
Comprehensive Academic and Research	3,028	2.6%	2,669	2.2%	3,153	2.6%	3,284	2.7%	3,452	2.7%
Grant MacEwan University	561	3.2%	680	3.7%	666	3.5%	734	3.9%	756	4.0%
Mount Royal University	457	3.0%	504	3.1%	556	3.5%	543	3.5%	528	3.5%
Baccalaureate and Applied Studies	1,018	3.1%	1,184	3.4%	1,221	3.5%	1,276	3.7%	1,284	3.8%
Northern Alberta Institute of Technology	195	0.7%	203	0.7%	729	2.6%	791	3.0%	926	3.4%
Southern Alberta Institute of Technology	100	0.3%	141	0.5%	332	1.3%	402	1.6%	541	2.0%
Polytechnical	295	0.5%	344	0.6%	1,060	2.0%	1,193	2.3%	1,465	2.7%
Bow Valley College	148	1.8%	9	0.1%	253	2.9%	313	3.3%	381	3.6%
Grande Prairie Regional College	304	13.5%	492	12.4%	493	13.0%	468	12.2%	463	11.8%
Keyano College	312	11.7%	377	13.2%	400	13.6%	339	11.8%	310	10.5%
Lakeland College	273	3.5%	242	3.3%	360	4.5%	300	4.1%	279	3.7%
Lethbridge College	326	5.1%	308	4.7%	328	5.0%	387	6.0%	387	6.1%
Medicine Hat College	28	0.5%	19	0.4%	17	0.3%	18	0.3%	24	0.6%
NorQuest College	796	10.7%	729	8.7%	665	8.9%	624	9.2%	525	7.8%
Northern Lakes College	730	42.1%	757	44.3%	811	46.3%	702	36.3%	754	34.3%
Olds College	71	2.6%	37	1.5%	51	2.1%	49	2.0%	91	3.5%
Portage College	940	30.7%	957	32.2%	867	24.2%	961	28.6%	976	28.2%
Red Deer College	104	1.4%	114	1.6%	179	2.5%	202	3.1%	224	3.5%
Comprehensive Community	3,990	7.4%	3,990	7.0%	4,374	7.7%	4,317	7.7%	4,372	7.8%
Ambrose University College	0	0.0%	0	0.0%	0	0.0%	0	0.0%	8	1.3%
Canadian University College	10	2.3%	11	2.3%	12	2.1%	10	1.6%	9	1.4%
Concordia University College of Alberta	64	3.6%	80	4.3%	90	5.1%	92	5.5%	94	5.8%
King's University College, The	14	2.1%	18	2.5%	15	2.1%	13	1.8%	10	1.4%
St. Mary's University College	0	0.0%	0	0.0%	6	1.0%	0	0.0%	0	0.0%
Independent Academic	88	2.2%	109	2.6%	123	2.9%	118	2.8%	124	3.0%
Alberta College of Art and Design	34	2.6%	45	3.4%	50	3.8%	52	3.9%	51	4.1%
Specialized Arts and Culture	34	2.6%	45	3.4%	50	3.8%	52	3.9%	51	4.1%
TOTAL	8,357	3.2%	8,257	3.1%	9,886	3.7%	10,101	3.8%	10,610	3.9%

Notes:
1. In September 2009 the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2. As of June 30, 2009, Taylor University College and Seminary became Taylor College and Seminary and ceased offering undergraduate academic baccalaureate programs, meaning no enrolments will be reported as of 2009–10.
3. Table does not include data for the Banff Centre.
4. Values less than 5 are suppressed to "0".
Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

B10. Aboriginal Student Enrolment (FLE) by Program Band and Credential, 2012–13

Program Band		Applied and Bachelor's	Master's	Doctoral	Certificate	Diploma	Non-credential	All Credential Types
Business	All Students	11,397.2	1,241.8	123.3	1,552.2	7,310.8	265.8	21,891.1
	Aboriginal students	243.2	16.2	0.0	150.4	266.5	9.5	685.9
Education	All Students	5,032.0	1,024.2	440.5	276.9	128.9	491.6	7,394.0
	Aboriginal students	223.7	44.0	33.0	24.2	5.9	26.4	357.2
Health Sciences	All Students	11,955.7	2,699.5	771.2	4,424.1	5,549.6	1,390.5	26,790.7
	Aboriginal students	334.0	44.1	5.0	157.0	180.9	43.3	764.3
Languages, Social Sciences, Arts & Humanities	All Students	22,177.4	1,371.9	812.0	753.5	4,493.5	10,637.8	40,246.0
	Aboriginal students	770.5	47.7	13.3	122.0	285.2	492.8	1,731.5
Legal & Security	All Students	1,318.5	35.4	10.0	156.2	1,586.6	187.1	3,293.8
	Aboriginal students	40.4	0.3	0.0	22.7	74.7	0.3	138.5
Physical, Natural & Applied Sciences	All Students	19,982.5	3,515.3	3,065.3	479.2	2,675.6	733.8	30,451.6
	Aboriginal students	310.2	33.8	18.0	19.6	86.0	16.1	483.7
Preparatory & Basic Upgrading	All Students	0.0	0.0	0.0	0.0	0.0	9,825.9	9,825.9
	Aboriginal students	0.0	0.0	0.0	0.0	0.0	1,136.9	1,136.9
Recreation	All Students	2,339.3	118.2	92.5	41.4	417.3	430.9	3,439.5
	Aboriginal students	78.3	1.8	1.0	1.1	13.2	19.7	115.1
Trades & Technologists	All Students	310.6	0.0	0.0	10,023.9	5,369.2	118.0	15,821.8
	Aboriginal students	1.8	0.0	0.0	487.8	152.9	2.6	645.1
All Program Bands	**All Students**	**74,513.1**	**10,006.4**	**5,314.7**	**17,707.5**	**27,531.4**	**24,081.3**	**159,154.4**
	Aboriginal students	2,002.2	188.0	70.4	984.9	1,065.3	1,747.5	6,058.2

Notes: Table does not include data for the Banff Centre.
Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

B11. Visa Student Enrolment (Headcount)

Institution	2008–09		2009–10		2010–11		2011–12		2012–13	
	Visa student enrolment	% of total enrolment	Visa student enrolment	% of total enrolment	Visa student enrolment	% of total enrolment	Visa student enrolment	% of total enrolment	Visa student enrolment	% of total enrolment
University of Alberta	3,794	9.4%	4,440	10.7%	5,050	12.0%	5,801	13.7%	6,492	15.1%
University of Calgary	2,328	7.6%	2,677	8.2%	2,545	7.7%	2,675	7.8%	2,860	8.3%
University of Lethbridge	584	6.7%	563	6.2%	547	5.9%	571	6.1%	563	6.2%
Comprehensive Academic and Research	**6,701**	**5.8%**	**7,675**	**6.4%**	**8,131**	**6.7%**	**9,037**	**7.4%**	**9,902**	**7.9%**
Grant MacEwan University	642	3.6%	727	4.0%	894	4.7%	963	5.1%	1,028	5.4%
Mount Royal University	939	6.2%	830	5.2%	763	4.8%	912	5.8%	751	5.0%
Baccalaureate and Applied Studies	**1,581**	**4.8%**	**1,557**	**4.5%**	**1,657**	**4.7%**	**1,874**	**5.4%**	**1,772**	**5.2%**
Northern Alberta Institute of Technology	1,142	3.9%	1,016	3.7%	1,154	4.1%	1,143	4.3%	1,262	4.6%
Southern Alberta Institute of Technology	761	2.7%	787	3.0%	766	3.0%	1,045	4.0%	1,058	4.0%
Polytechnical	**1,902**	**3.3%**	**1,803**	**3.3%**	**1,917**	**3.6%**	**2,188**	**4.2%**	**2,317**	**4.3%**
Bow Valley College	397	4.8%	384	4.5%	406	4.6%	461	4.8%	478	4.5%
Grande Prairie Regional College	58	2.6%	61	1.5%	45	1.2%	47	1.2%	44	1.1%
Keyano College	23	0.9%	41	1.4%	49	1.7%	46	1.6%	47	1.6%
Lakeland College	6	0.1%	5	0.1%	6	0.1%	21	0.3%	50	0.7%
Lethbridge College	197	3.1%	236	3.6%	322	4.9%	518	8.0%	306	4.9%
Medicine Hat College	207	3.9%	198	3.8%	269	5.0%	344	6.3%	328	8.0%
NorQuest College	495	6.7%	395	4.7%	88	1.2%	84	1.2%	125	1.9%
Northern Lakes College	2	0.1%	1	0.1%	2	0.1%	4	0.2%	4	0.2%
Olds College	75	2.7%	54	2.2%	53	2.2%	31	1.3%	130	5.1%
Portage College	4	0.1%	17	0.6%	4	0.1%	8	0.2%	3	0.1%
Red Deer College	55	0.8%	46	0.6%	57	0.8%	66	1.0%	76	1.2%
Comprehensive Community	**1,514**	**2.8%**	**1,431**	**2.5%**	**1,296**	**2.3%**	**1,619**	**2.9%**	**1,580**	**2.8%**
Ambrose University College	17	3.6%	5	0.9%	20	3.4%	11	1.8%	23	3.8%
Canadian University College	76	17.3%	70	14.7%	63	11.1%	64	10.4%	70	11.3%
Concordia University College of Alberta	49	2.7%	59	3.1%	56	3.2%	54	3.2%	67	4.2%
King's University College, The	44	6.5%	45	6.2%	46	6.4%	43	6.0%	44	6.2%
St. Mary's University College	5	1.0%	11	1.9%	13	2.1%	22	3.4%	19	3.0%
Taylor University College and Seminary	12	7.6%	0	-	0	-	0	-	0	-
Independent Academic	**203**	**5.0%**	**189**	**4.5%**	**198**	**4.7%**	**194**	**4.5%**	**223**	**5.3%**
Alberta College of Art and Design	72	5.4%	69	5.2%	70	5.3%	63	4.8%	60	4.8%
Specialized Arts and Culture	**72**	**5.4%**	**69**	**5.2%**	**70**	**5.3%**	**63**	**4.8%**	**60**	**4.8%**
All Institutions (excluding AU)	11,841	4.5%	12,616	4.8%	13,145	4.9%	14,836	5.6%	15,713	5.8%

Notes:
1. In 2009, the Lieutenant Governor in Council renamed Grant MacEwan College and Mount Royal College as Grant MacEwan University and Mount Royal University.
2. As of June 30, 2009, Taylor College and Seminary ceased offering undergraduate academic baccalaureate programs and no enrolments are reported after that.
3. Table does not include data for the Banff Centre. Athabasca University is not a campus-based institution, and therefore Athabasca University visa enrolments have NOT been included in visa student counts above.
4. Values listed in the table represent the number of Unique Students at the level you are looking at. Summing up rows may lead to over-inflated values.

Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

B12. Visa Student Enrolment (FLE) by Program Band and Credential, 2012–13

Program Band		Doctoral	Master's	Applied & Bachelor's	Diploma	Certificate	Non-Credential	All Credentials
Business	All students	123.3	1,241.8	11,397.2	7,310.8	1,552.2	265.8	21,891.1
	Visa students	36.3	138.8	880.8	1,038.8	51.4	8.6	2,154.8
Education	All students	440.5	1,024.2	5,032.0	128.9	276.9	491.6	7,394.0
	Visa students	37.3	18.5	37.8	0.3	5.0	0.4	99.3
Health Sciences	All students	771.2	2,699.5	11,955.7	5,549.6	4,424.1	1,390.5	26,790.7
	Visa students	211.1	182.8	209.0	188.8	321.3	29.5	1,142.5
Languages, Social Sciences, Arts & Humanities	All students	812.0	1,371.9	22,177.4	4,493.5	753.5	10,637.8	40,246.0
	Visa students	234.8	217.2	1,636.8	435.6	30.4	697.9	3,252.8
Legal & Security	All students	10.0	35.4	1,318.5	1,586.6	156.2	187.1	3,293.8
	Visa students	3.7	8.6	18.2	20.0	0.0	0.0	50.5
Physical, Natural & Applied Sciences	All students	3,065.3	3,515.3	19,982.5	2,675.6	479.2	733.8	30,451.6
	Visa students	1,601.7	1,454.2	1,600.6	69.4	28.5	43.4	4,797.7
Preparatory & Basic Upgrading	All students	0.0	0.0	0.0	0.0	0.0	9,825.9	9,825.9
	Visa students	0.0	0.0	0.0	0.0	0.0	483.9	483.9
Recreation	All students	92.5	118.2	2,339.3	417.3	41.4	430.9	3,439.5
	Visa students	34.3	11.2	25.7	5.4	0.7	0.0	77.3
Trades & Technologies	All students	0.0	0.0	310.6	5,369.2	10,023.9	118.0	15,821.8
	Visa students	0.0	0.0	61.7	396.6	53.4	3.0	514.7
All Program Bands	**All students**	**5,314.7**	**10,006.4**	**74,513.1**	**27,531.4**	**17,707.5**	**24,081.3**	**159,154.4**
	Visa students	2,159.2	2,031.3	4,470.6	2,154.9	490.7	1,266.8	12,573.4

Notes: Data for visa students do not include the Banff Centre and Athabasca University.
Source: Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

B13. Students with Disabilities Seeking Supports

	2008–09		2009–10		2010–11		2011–12		2012–13	
	Students seeking supports	% seeking supports	Students seeking supports	% seeking supports	Students seeking supports	% seeking supports	Students seeking supports	% seeking supports	Students seeking supports	% seeking supports
Athabasca University	1,597	4.1%	1,868	4.9%	1,509	3.9%	1,286	3.3%	2,001	4.9%
University of Alberta	920	2.3%	972	2.4%	846	2.0%	845	2.0%	1,535	3.6%
University of Calgary	812	2.6%	900	2.8%	1,052	3.2%	1,166	3.4%	1,326	3.8%
University of Lethbridge, The	233	2.7%	284	3.1%	348	3.7%	409	4.4%	335	3.7%
Grant MacEwan University	444	2.5%	496	2.7%	583	3.0%	591	3.1%	624	3.3%
Mount Royal University	650	4.3%	790	4.9%	695	4.4%	669	4.3%	772	5.1%
Northern Alberta Institute of Technology	538	1.8%	670	2.4%	969	3.5%	982	3.7%	1,114	4.1%
Southern Alberta Institute of Technology	630	2.2%	695	2.6%	643	2.5%	596	2.3%	562	2.1%
Bow Valley College	397	4.8%	461	5.4%	495	5.6%	470	4.9%	549	5.1%
Grande Prairie Regional College	25	1.1%	80	2.0%	70	1.8%	75	2.0%	96	2.5%
Keyano College	193	7.3%	223	7.8%	210	7.2%	208	7.2%	188	6.4%
Lakeland College	140	1.8%	134	1.8%	183	2.3%	180	2.4%	207	2.8%
Lethbridge College	162	2.5%	185	2.8%	246	3.8%	192	3.0%	206	3.3%
Medicine Hat College	175	3.3%	283	5.4%	233	4.3%	314	5.8%	238	5.8%
NorQuest College	527	7.1%	596	7.1%	644	8.7%	541	7.9%	435	6.5%
Northern Lakes College	45	2.6%	51	3.0%	59	3.4%	43	2.2%	31	1.4%
Olds College	85	3.1%	69	2.8%	93	3.8%	130	5.3%	118	4.6%
Portage College	114	3.7%	147	4.9%	138	3.8%	109	3.2%	117	3.4%
Red Deer College	172	2.4%	300	4.1%	333	4.7%	293	4.4%	307	4.8%
Ambrose University College	n/a	n/a	n/a	n/a	116	20.0%	134	21.5%	107	17.7%
Canadian University College	n/a	n/a	n/a	n/a	n/a	n/a	14	2.3%	14	2.3%
Concordia University College of Alberta	n/a	n/a	57	3.0%	67	3.8%	80	4.8%	85	5.3%
St. Mary's University College	n/a	n/a	n/a	n/a	34	5.4%	35	5.3%	40	6.2%
The King's University College	n/a	n/a	n/a	n/a	19	2.6%	20	2.8%	28	4.0%
Alberta College of Art and Design	163	12.3%	162	12.3%	160	12.2%	163	12.3%	181	14.5%
Banff Centre	n/a	n/a	n/a	n/a	29	0.8%	20	0.6%	22	0.7%
TOTAL	8,022	3.0%	9,423	3.5%	9,759	3.6%	9,545	3.6%	11,210	4.1%

Notes:
1. Data on disabled students relies on self–identification when applying for services. Data may underestimate the actual number of students with disabilities and should be considered preliminary.
2. In September 2009 the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
Source: Students with Disabilities – Post-secondary Institutions; Percentages – Alberta Innovation and Advanced Education, Learner and Enrolment Reporting System.

B14. Program Completers – Credential Programs

Institutions	2008–09	2009–10	2010–11	2011–12	2012–13
Athabasca University	1,590	1,768	1,814	1,725	1,736
University of Alberta	8,240	8,433	8,410	8,487	8,608
University of Calgary	5,852	6,191	6,479	6,388	6,667
University of Lethbridge	1,960	1,932	1,917	2,035	1,940
Comprehensive Academic and Research	**17,642**	**18,324**	**18,620**	**18,635**	**19,001**
Grant MacEwan University	2,428	2,186	2,333	2,537	2,923
Mount Royal University	1,097	1,109	1,458	1,529	1,568
Baccalaureate and Applied Studies	**3,525**	**3,295**	**3,791**	**4,066**	**4,491**
Northern Alberta Institute of Technology	7,383	7,663	7,281	7,324	7,030
Southern Alberta Institute of Technology	4,482	4,795	6,098	6,011	6,353
Polytechnical	**11,865**	**12,458**	**13,379**	**13,335**	**13,383**
Bow Valley College	691	903	974	1,100	1,326
Grande Prairie Regional College	220	712	773	693	609
Keyano College	409	626	598	627	526
Lakeland College	866	1,031	1,266	1,282	1,190
Lethbridge College	954	1,122	1,090	1,355	1,098
Medicine Hat College	314	441	546	586	561
NorQuest College	1,370	1,094	1,267	1,944	1,431
Northern Lakes College	260	338	414	496	495
Olds College	618	676	577	575	638
Portage College	422	344	425	489	374
Red Deer College	588	1,441	1,554	1,355	1,269
Comprehensive Community	**6,712**	**8,728**	**9,484**	**10,502**	**9,517**
Ambrose University College	53	35	53	84	91
Canadian University College	62	59	66	56	100
Concordia University College of Alberta	340	331	350	296	303
King's University College, The	110	125	134	148	145
St. Mary's University College	44	72	82	79	95
Taylor University College and Seminary	34	0	0	0	0
Independent Academic	**643**	**622**	**685**	**663**	**734**
Alberta College of Art and Design	193	190	191	215	212
Specialized Arts and Culture	**193**	**190**	**191**	**215**	**212**
TOTAL	**40,580**	**43,617**	**46,150**	**47,416**	**47,338**

Notes:
1. Program Completers include completers in Certificate, Degree and Diploma programs only. Students completing their final instructional training period in the apprenticeship program are included in these numbers. The numbers do not indicate unique graduates, as students who graduate from multiple program bands, credentials types or institutions are counted under both categories.
2. Table does not include data for the Banff Centre.
3. In September 2009 the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
4. As of June 30, 2009, Taylor University College and Seminary became Taylor College and Seminary and ceased offering undergraduate academic baccalaureate programs.
Source: Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System.

B15. Student Financial Assistance Recipients

Sector	2009–10	2010–11	2011–12	2012–13	2013–14
Comprehensive Academic and Research Institutions	17,453	19,738	18,503	20,222	20,801
Baccalaureate and Applied Studies Institutions	7,325	8,565	7,904	8,491	8,741
Polytechnical Institutions	4,951	5,676	5,573	6,215	6,524
Comprehensive Community Institutions	4,756	5,898	5,870	6,000	6,078
Independent Academic Institutions	1,096	1,220	1,187	1,261	1,265
Specialized Arts and Culture Institutions	347	378	371	373	359

Notes:
Total values listed in this table refer only to student financial assistance recipients at publically funded post-secondary institutions, and, as such, will not match figures of overall student financial assistance recipients reported elsewhere. If students attend more than one institution, they may be counted twice.
Source: Alberta Innovation and Advanced Education, Student Aid.

Glossary

Aboriginal Identity	Those individuals who reported identifying with at least one Aboriginal group (North American Indian, Métis, or Inuit), and/or those who reported being a Treaty Indian or a Registered Indian as defined by the Indian Act of Canada, and/or those who reported that they were members of an Indian band or First Nation.
Alberta Student Number (ASN)	ASN is a unique identifier for all learners in Alberta's education system (K-12 system and the post-secondary system). Once learners are assigned an ASN, it stays with them for the course of their formal learning process. Non-Albertan Canadian students and international students who move to Alberta to study are also assigned an ASN upon entering the system.
Applicant	An individual who applies to a program at a publicly funded post-secondary institution in Alberta.
Application	A request for acceptance into a program at a publicly funded post-secondary institution in Alberta.
Apprenticeship	A structured system of supervised training leading to certification in a designated trade, occupation, or craft. Programs involve a combination of on-the-job training and technical instruction, whereby an apprentice gains experiential learning and develops skills.
CIP 2011	Classification of Instructional Programs (CIP) 2011 is a system of grouping instructional programs of study into higher-level categories for ease of use in data processing and information gathering.
Credential	A qualification resulting in the completion of a parchment program.
Credit	All instructional activity that institutions recognize as completing the requirements of degree, diploma, certificate, or other programs approved by the Minister, regardless of the means of delivery. Enrolments in credit programs are reported through LERS.
Full-Load Equivalent (FLE)	A measure of enrolment in which one FLE represents one student for a year of study (typically September through April) taking a full course load.
Full-time Student	An active student who is registered in the program for at least 60% of the full load of the program for the academic year in at least one session.
Geographic Service Region	Based primarily on county division boundaries, one of 10 areas of the province generally served by a Comprehensive Community Institution.

International Student	A student, in possession of a study visa, attending a publicly funded post-secondary institution in Alberta.
Part-time Student	An active student who is registered in the program for less than 60% of the full load of the program for the academic year for all enrolled sessions.
Post-secondary Attainment Rate	The proportion of population aged 25-64 who have completed post-secondary education.
Post-secondary Participation Rate	The proportion of those aged 18-34 participating in post-secondary education.
Program Band	One of nine high-level program groupings based on CIP 2000 categories designed to enhance the ease of data analysis and the communication and presentation of data.
Program Completer (Graduate)	Measured by the number of credentials awarded, a student who has been determined by his or her institution to have completed all program (graduation) requirements of a ministerial approved program and to whom the institution confers a credential where a credential is offered.
Sector	One of six categories of publicly funded post-secondary institutions in Alberta as defined in legislation: (1) Comprehensive Academic and Research Institutions, (2) Baccalaureate and Applied Studies Institutions, (3) Comprehensive Community Institutions, (4) Polytechnical Institutions, (5) Independent Academic Institutions, and (6) Specialized Arts and Culture Institutions.
Unduplicated Student Headcount	A measure of enrolment referring to the number of unique students registered at and attending a publicly funded post-secondary institution in Alberta (full- and part-time, at any level).

Endnotes

[1] Alberta Treasury Board and Finance (2014). *Alberta Components of Growth by Quarter Data Tables.* http://www.finance.alberta.ca/aboutalberta/population_reports/Alberta-Components-of-Population-Growth.xls.

[2] Alberta Treasury Board and Finance (2014). *Population Projection Alberta 2014–2041.* http://www.finance.alberta.ca/aboutalberta/population-projections/2014-2041-alberta-population-projections.pdf.

[3] Alberta Treasury Board and Finance (2014). *Alberta Components of Growth by Quarter Data Tables.* http://www.finance.alberta.ca/aboutalberta/population_reports/Alberta-Components-of-Population-Growth.xls.

[4] Alberta Innovation and Advanced Education (2014). *Alberta Labour Force Profiles: Immigrants in the Labour Force 2013.* http://work.alberta.ca/documents/labour-profile-immigrants.pdf.

[5] Citizenship and Immigration Canada (2013). *Annual Report to Parliament on Immigration 2012.* http://www.cic.gc.ca/english/pdf/pub/annual-report-2012.pdf.

[6] Alberta Treasury Board and Finance (2014). *Population Projection Alberta 2014–2041 – Highlights.* http://www.finance.alberta.ca/aboutalberta/population-projections/2014-2041-Alberta-Population-Projections-Highlights.pdf.

[7] Alberta Treasury Board and Finance (2014). *Population Projection Alberta 2014–2041 – Highlights.* http://www.finance.alberta.ca/aboutalberta/population-projections/2014-2041-Alberta-Population-Projections-Highlights.pdf.

[8] Statistics Canada (2013). *Aboriginal Peoples in Canada: First Nations People, Métis and Inuit.* National Household Survey, 2011. Ottawa: Statistics Canada. http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-011-x/99-011-x2011001-eng.pdf

[9] Statistics Canada (2013). *Aboriginal Peoples in Canada: First Nations People, Métis and Inuit.* National Household Survey, 2011. Ottawa: Statistics Canada. http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-011-x/99-011-x2011001-eng.pdf.

[10] Statistics Canada (2013). *Aboriginal Peoples in Canada: First Nations People, Métis and Inuit.* National Household Survey, 2011. Ottawa: Statistics Canada. http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-011-x/99-011-x2011001-eng.pdf.

[11] Statistics Canada (2013). 2011 National Household Survey – custom tabulation.

[12] Alberta Treasury Board and Finance (2013). *2011 National Household Survey – Highlights: Release #1.* http://www.finance.alberta.ca/aboutalberta/national-household-survey/2011/2011-national-household-survey-release1.pdf.

[13] Alberta Innovation and Advanced Education (2014). *Budget 2014 Overview.* http://finance.alberta.ca/publications/budget/budget2014/fact-card-overview.pdf

[14] Alberta Innovation and Advanced Education (2014). Budget 2014. http://eae.alberta.ca/ministry/budget2014.aspx.

[15] Government of Alberta (2014). *2014–15 Fiscal Plan Volume: Economic Outlook.* http://finance.alberta.ca/publications/budget/budget2014/fiscal-plan-economic-outlook.pdf

[16] Government of Alberta (2014). *2014–15 Fiscal Plan Volume: Economic Outlook.* http://finance.alberta.ca/publications/budget/budget2014/fiscal-plan-economic-outlook.pdf

[17] Government of Alberta (2014). *2014–15 Fiscal Plan Volume: Economic Outlook.* http://finance.alberta.ca/publications/budget/budget2014/fiscal-plan-economic-outlook.pdf

[18] Canadian Council on Learning (2006). Factors Influencing Post-secondary Enrolment Increases and Decreases. Vancouver: Canadian Council on Learning. http://www.ccl-cca.ca/pdfs/SystematicReviews/EnrolmentPSE.pdf.

[19] Usher, A. and Dunn, R. (2009). *On the Brink: How the Recession of 2009 Will Affect Post-secondary Education.* Toronto: Educational Policy Institute. http://www.educationalpolicy.org/publications/pubpdf/09002_recession.pdf.

[20] Alberta Innovation and Advanced Education (2014). Alberta Innovation and Advanced Education – Learner and Enrolment Reporting System (LERS).

[21] Statistics Canada (2014). *2013* Labour Force Survey – Custom Tabulation.

[22] Alberta Jobs, Skills, Training and Labour (2014). *Alberta's Supply Outlook Model 2013–2023: Education and Skills.* http://work.alberta.ca/documents/supply-outlook-model-education-and-skills.pdf.

[23] Skills in Canada: First Results from the Programme for the International Assessment of Adult Competencies (PIAAC) (2012). http://www.statcan.gc.ca/pub/89-555-x/89-555-x2013001-eng.pdf.

[24] Government of the United Kingdom, Her Majesty's Revenue and Customs, Department for Business, Innovation, and Skills (2013). *Government reveals new support to protect interns' right to fair pay* https://www.gov.uk/government/news/government-reveals-new-support-to-protect-interns-right-to-fair-pay

[25] Spitznagel, E. (2013) *Unpaid Intern Lawsuits Explained.* Business Week. http://www.businessweek.com/articles/2013-06-27/unpaid-intern-lawsuits-explained

[26] CBC News (2014). *Unpaid internships at Toronto Life, The Walrus shut down by Ontario* http://www.cbc.ca/news/business/unpaid-internships-at-toronto-life-the-walrus-shut-down-by-ontario-1.2589115

[27] Seaborn, C. (2013). *Ontario Labour Relations Board finds student owed wages.* Canadian Intern Association. http://www.internassociation.ca/ontariolabourrelationsboardfindsstudentowedwages/

[28] Sandhu v. Brar. Ontario Labour Relations Board Ruling. (2013). Accessed at CanLII website: http://www.canlii.org/en/on/onlrb/doc/2013/2013canlii43024/2013canlii43024.html

[29] Stirling, A., Kerr, G.,Banwell, J., MacPherson, E., Bandealy, A., Battaglia, A., (2014). *What is an Internship? An Inventory and Analysis of "Internship" Opportunities Available to Ontario Postsecondary Students.* Higher Education Quality Council of Ontario. http://www.heqco.ca/SiteCollectionDocuments/Internship%20ENG.pdf

[30] "augmented reality" (2014). Oxford Dictionaries. http://www.oxforddictionaries.com/definition/english/augmented-reality

[31] The Health CARE Project website homepage (2014). City University London. http://blogs.city.ac.uk/care/about/

[32] Project Scarlet website homepage (2014) University of Manchester. http://teamscarlet.wordpress.com/about/

[33] Ryerson University Research News. (2013). *Ryerson Architecture Professor keeps it real with new Augmented Reality Design Software.* Ryerson University. http://www.ryerson.ca/news/media/General_Public/20130715_m_arddd.html

[34] HLTHSIM Project website homepage. (2014). *Multi-Modal Augmented Reality for Training Healthcare Professionals.* Graphics Animation and New Media Centre of Excellence (GRAND NCE). http://grand-nce.ca/research/phase-1/projects/projectdata/hlthsim

[35] Chen, A. (2012). *3-D Printers Spread From Engineering Departments to Designs Across Disciplines.* Chronicle of Higher Education. http://chronicle.com/article/3-D-Printers-Arent-Just-for/134440/

[36] 3-D Printing Project Homepage. (2013). *Researchers at Emily Carr and the U of A collaborate on new low-cost 3D-printed surgical models.* Graphics Animation and New Media Centre of Excellence (GRAND NCE). http://grand-nce.ca/newsandmedia/news-container/2013/researchers-at-emily-carr-and-the-u-of-a-collaborate-on-new-low-cost-3d-printed-surgical-models

[37] Nanotechnology Programs Homepage. (2014). Northern Alberta Institute of Technology. http://www.nait.ca/86269.htm

[38] Curry School of Education. (2014). *Using 3D Printers to Transform Learning in Undergraduate Mechanical Engineering Courses.* The University of Virginia. http://curry.virginia.edu/research/centers/castlhe/project/using-3d-printers-to-transform-learning-in-undergraduate-mechanical-enginee

[39] Deil-Amen, R., Rio-sAguilar, C., Davis III, C.H.F., Gonzalez Canche, M. (2012). *Social Media in Higher Education: A Literature Review and Research Directions.* University of Arizona and Claremont Graduate University. http://works.bepress.com/cgi/viewcontent.cgi?article=1003&context=hfdavis

[40] Huron Education and mStoner (2013). *Best Practices in Social Media: Summary of Findings from the Fourth Comprehensive Study of Social Media Use by Schools, Colleges and Universities.* Council for Advancement and Support of Education. http://www.case.org/Documents/AboutCASE/Newsroom/CASE-Huron-mStoner-SM2013-topline.pdf

[41] Johnson, L., Adams Becker, S., Estrada, V., Freeman, A. (2014). *NMC Horizon Report: 2014 Higher Education Edition.* The New Media Consortium. http://cdn.nmc.org/media/2014-nmc-horizon-report-he-EN-SC.pdf

[42] Huron Education and mStoner (2013). *Best Practices in Social Media: Summary of Findings from the Fourth Comprehensive Study of Social Media Use by Schools, Colleges and Universities.* Council for Advancement and Support of Education. http://www.case.org/Documents/AboutCASE/Newsroom/CASE-Huron-mStoner-SM2013-topline.pdf

[43] Pardy, L., Thompson, D. and Patridge, S. (2014). *Social Media in the Canadian Post-Secondary Classroom*, in Mallia, G. (2014). The Social Classroom: Integrating Social Network Use in Education. IGI Global, Hershey: USA.

[44] The Coastal Walkabout website homepage (2012). Murdoch University Cetacean Research Unit. http://mucru.org/our-research/research-projects/citizen-science-coastal-walkabout/

[45] Swedish Twitter University website homepage. (2012). http://svtwuni.wordpress.com/the-concept/

[46] Sandeen, C.A. (2014). *Unbundling Versus Designing Faculty Roles.* American Council on Education, Center for Education, Attainment and Innovation, Presidential Innovation Lab. http://www.acenet.edu/news-room/Documents/Unbundling-Versus-Designing-Faculty-Roles.pdf

[47] Sandeen, C.A. (2014). *Unbundling Versus Designing Faculty Roles.* American Council on Education, Center for Education, Attainment and Innovation, Presidential Innovation Lab. http://www.acenet.edu/news-room/Documents/Unbundling-Versus-Designing-Faculty-Roles.pdf

[48] Universities UK. (2012). Futures For Higher Education: Analysing Trends http://www.universitiesuk.ac.uk/highereducation/Documents/2012/FuturesForHigherEducation.pdf

[49] Enstitute homepage. (2014). http://www.enstitute.org/

[50] University of Pennsylvania Press Release (2013). *Penn GSE Study Shows MOOCs Have Relatively Few Active Users, With Only a Few Persisting to Course End.* http://www.gse.upenn.edu/pressroom/press-releases/2013/12/penn-gse-study-shows-moocs-have-relatively-few-active-users-only-few-persist

[51] Jordan, K. (2013). *MOOC Completion Rates: The Data.* http://www.katyjordan.com/MOOCproject.html

[52] Jordan, K. (2013). *MOOC Completion Rates: The Data.* http://www.katyjordan.com/MOOCproject.html

[53] Kolowich, S. (2013). *Coursera Takes a Nuanced View of MOOC Dropout Rates.* The Chronicle of Higher Education. http://chronicle.com/blogs/wiredcampus/coursera-takes-a-nuanced-view-of-mooc-dropout-rates/43341

[54] Ho, A. D., Reich, J., Nesterko, S., Seaton, D. T., Mullaney, T., Waldo, J., & Chuang, I. (2014). *HarvardX and MITx: The first year of open online courses* (HarvardX and MITx Working Paper No. 1). http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2381263

[55] "learning analytics" (2011). 1st International Conference on Learning Analytics and Knowledge. https://tekri.athabascau.ca/analytics/

[56] Technology Enhanced Learning and Knowledge Institute website homepage. (2014). Athabasca University. https://tekri.athabascau.ca/content/learning-analytics-knowledge

[57] Kelly, R. (2013). *A Data-Driven Approach to Student Retention and Success.* Faculty Focus Magazine. http://www.facultyfocus.com/articles/academic-leadership/a-data-driven-approach-to-student-retention-and-success/

[58] Learning Analytics Pilot website homepage. (2014). University of Wisconsin-Madison. http://www.cio.wisc.edu/learning-analytics-pilot.aspx

[59] Tamburri, R. (2014). *Will Competency-Based Degree Programs Come to Canada?* University Affairs. http://www.universityaffairs.ca/competency-based-degree-programs-are-growing-in-the-us.aspx

[60] Tamburri, R. (2014). *Will Competency-Based Degree Programs Come to Canada?* University Affairs. http://www.universityaffairs.ca/competency-based-degree-programs-are-growing-in-the-us.aspx

[61] Tamburri, R. (2014). *Will Competency-Based Degree Programs Come to Canada?* University Affairs. http://www.universityaffairs.ca/competency-based-degree-programs-are-growing-in-the-us.aspx

[62] Tamburri, R. (2014). *Will Competency-Based Degree Programs Come to Canada?* University Affairs. http://www.universityaffairs.ca/competency-based-degree-programs-are-growing-in-the-us.aspx

[63] United States Department of Education. (2014). *U.S. Department of Education Expands Innovation in Higher Education through the Experimental Sites Initiative.* Departmental Press Release. http://www.ed.gov/news/press-releases/us-department-education-expands-innovation-higher-education-through-experimental

[64] Fain, P. (2014). *Taking the Direct Path.* Inside Higher Ed. https://www.insidehighered.com/news/2014/02/21/direct-assessment-and-feds-take-competency-based-education

[65] Fain, P. (2014). *Taking the Direct Path.* Inside Higher Ed. https://www.insidehighered.com/news/2014/02/21/direct-assessment-and-feds-take-competency-based-education

[66] Carlson, S. (2013). *Competency-Based Education Goes Mainstream in Wisconsin.* Chronicle of Higher Education. http://chronicle.com/article/Competency-Based-Education/141871/?cid=wc&utm_source=wc&utm_medium=en

[67] Royal College of Physicians and Surgeons of Canada. (2014). *Competence By Design.* http://www.royalcollege.ca/portal/page/portal/rc/common/documents/canmeds/cbd/what_is_cbd_e.pdf

[68]Abner, B., Bartosh, O., Ungerleider, C., & Tiffin, R. (2014). *Productivity Implications of a Shift to Competency-Based Education: An environmental scan and review of the relevant literature.* Higher Education Quality Council of Ontario. http://heqco.ca/SiteCollectionDocuments/CBE%20Report-ENG.pdf

[69] Lewis, J. (2014). *Engaged students, higher marks on finals: benefits of the inverted classroom.* University of Toronto News. http://news.utoronto.ca/engaged-students-higher-marks-finals-benefits-inverted-classroom?utm_source=Bulletin&utm_medium=Email&utm_content=Research

[70] Mangan, C. (2013). *Inside the Flipped Classroom.* Chronicle of Higher Education. http://chronicle.com/article/Inside-the-Flipped-Classroom/141891/

[71] Mangan, C. (2013). *Inside the Flipped Classroom.* Chronicle of Higher Education. http://chronicle.com/article/Inside-the-Flipped-Classroom/141891/

[72] University of Michigan Centre for Teaching and Learning (2014). *Flipped Classroom Reflection.* http://www.crlt.umich.edu/onlineworkshop/74767

[73] Plotnikoff, D. (2013). *Classes should do hands-on exercises before reading and video, Stanford researchers say.* Stanford University News. http://news.stanford.edu/news/2013/july/flipped-learning-model-071613.html

[74] Mangan, C. (2013). *Inside the Flipped Classroom.* Chronicle of Higher Education. http://chronicle.com/article/Inside-the-Flipped-Classroom/141891/

[75] Alberta Innovation and Advanced Education (2014). Guidelines for Board of Governors Members: An Introduction to Board Governance at Alberta's Public Post-Secondary Institutions http://eae.alberta.ca/media/383000/board%20manual%20complete%202014-01-23.pdf.

[76] Alberta Innovation and Advanced Education (2014). Guidelines for Board of Governors Members: An Introduction to Board Governance at Alberta's Public Post-Secondary Institutions http://eae.alberta.ca/media/383000/board%20manual%20complete%202014-01-23.pdf.

[77] Alberta Innovation and Advanced Education (2014). Guidelines for Board of Governors Members: An Introduction to Board Governance at Alberta's Public Post-Secondary Institutions http://eae.alberta.ca/media/383000/board%20manual%20complete%202014-01-23.pdf

[78] Alberta Innovation and Advanced Education (2014). Alberta Economic Quick Facts.

[79] Alberta Health (2007). Health Workforce Action Plan. http://www.health.alberta.ca/documents/Workforce-Action-Plan-2007.pdf.

[80] Alberta Jobs, Skills, Training and Labour (2014). Short-Term Employment Forecast 2013–2015.

[81] Alberta Jobs, Skills, Training and Labour (2014). Alberta's Occupational Demand and Supply Outlook 2013-2023.

[82] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[83] "In-jector" stands for Institutional Enrolment Projection Model.

[84] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Transfer Graduates: Final Report. http://eae.alberta.ca/media/349299/gradoutcomes_2012transfer.pdf.

[85] See http://employment.alberta.ca/Immigration/4512.html for more information on IQAS.

[86] Banister Research & Consulting Inc. (2011). 2011 Alberta Immigrant Client Outcomes Survey Report. Prepared for Alberta Human Services.

[87] Alberta Innovation and Advanced Education – Alberta Council on Admissions and Transfer (ACAT) Secretariat.

[88] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf.

[89] Alberta Innovation and Advanced Education. *High School Student Report*. 2013-14 Stakeholder Satisfaction Survey.

[90] Alberta Innovation and Advanced Education – Alberta Council on Admissions and Transfer (ACAT) Secretariat.

[91] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf.

[92] Alberta Innovation and Advanced Education (2012). Alberta Graduate Outcomes Survey Class of 2009–10, Custom Tabulation.

[93] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf.

[94] Alberta Innovation and Advanced Education – Student Aid.

[95] Alberta Innovation and Advanced Education – Private Vocational Training Branch.

[96] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Private Vocational Training Institution Graduates: Final Report. http://eae.alberta.ca/media/349296/gradoutcomes_2012pvt.pdf.

[97] Alberta Innovation and Advanced Education – Apprenticeship and Industry Training.

[98] Alberta Apprenticeship and Industry Training Board. *2013 Statistical Profiles.* http://tradesecrets.alberta.ca/sources/pdfs/board_annual_report/pdf/2013_statistical_report.pdf

[99] Alberta Innovation and Advanced Education. ATOMS database.

[100] Alberta Apprenticeship and Industry Training Board. *2013 Statistical Profiles.* http://tradesecrets.alberta.ca/sources/pdfs/board_annual_report/pdf/2013_statistical_report.pdf

[101] Alberta Apprenticeship and Industry Training Board. *2013 Statistical Profiles.* http://tradesecrets.alberta.ca/sources/pdfs/board_annual_report/pdf/2013_statistical_report.pdf

[102] Alberta Innovation and Advanced Education. *High School Student Report*. 2013-14 Stakeholder Satisfaction Survey.

[103] Alberta Innovation and Advanced Education. *High School Student Report*. 2013-14 Stakeholder Satisfaction Survey.

[104] Alberta Innovation and Advanced Education. *High School Student Report*. 2013-14 Stakeholder Satisfaction Survey.

[105] Alberta Apprenticeship and Industry Training Board. *2013 Statistical Profiles.* http://tradesecrets.alberta.ca/sources/pdfs/board_annual_report/pdf/2013_statistical_report.pdf

[106] There are six Aboriginal Colleges in Alberta that deliver post-secondary and foundational learning programs to Albertans. They offer accredited post-secondary courses, certificates, and degrees in partnership with publicly funded post-secondary institutions. For links to Aboriginal Colleges in Alberta, see http://eae.alberta.ca/post-secondary/funding/supportsinstitutions/aff/renaissance/recipients.aspx.

[107] For more information on services available to students with disabilities, see http://alis.alberta.ca/et/ep/pps/planning/disability.html.

[108] Alberta Innovation and Advanced Education (2013). Students with Disabilities – Post-secondary Institutions; Percentages – Learner and Enrolment Reporting System (LERS).

[109] Alberta Innovation and Advanced Education (2013) – Student Aid.

[110] Alberta Education (2013). Statistics by special education code. http://education.alberta.ca/admin/special/stats/bycode.aspx.

[111] Statistics Canada (2013) *Canadian Survey on Disability 2012: Data Tables, 2012* http://www5.statcan.gc.ca/olc-cel/olc.action?ObjId=89-654-X2013001&ObjType=46&lang=en&limit=0

[112] Statistics Canada (2013) *Canadian Survey on Disability 2012: Data Tables, 2012* http://www5.statcan.gc.ca/olc-cel/olc.action?ObjId=89-654-X2013001&ObjType=46&lang=en&limit=0

[113] Statistics Canada (2013) *2012 Canadian Survey on Disabilities – Custom Tabulation*

[114] Statistics Canada (2013) *2012 Canadian Survey on Disabilities – Custom Tabulation*

[115] Frenette, M. (2014). *An Investment of a Lifetime? The Long-term Labour Market Premiums Associated with a Postsecondary Education.* Ottawa: Statistics Canada. http://www.statcan.gc.ca/pub/11f0019m/11f0019m2014359-eng.htm.

[116] These customs tabulations were generated by Marc Frenette of Statistics Canada based on the methodology in the following research paper: Frenette, M. (2014). *An Investment of a Lifetime? The Long-term Labour Market Premiums Associated with a Postsecondary Education.* Ottawa: Statistics Canada. http://www.statcan.gc.ca/pub/11f0019m/11f0019m2014359-eng.htm.

[117] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[118] Alberta Innovation and Advanced Education (2012). Alberta Graduate Outcomes Survey Class of 2009–10, Custom Tabulation.

[119] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[120] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[121] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[122] Statistics Canada (2014). *2013 Labour Force Survey – Custom Tabulation.*

[123] Statistics Canada (2014). *2013 Labour Force Survey – Custom Tabulation.*

[124] Statistics Canada (2014). *2013 Labour Force Survey – Custom Tabulation.*

[125] Statistics Canada (2014). *2013 Labour Force Survey – Custom Tabulation.*

[126] Statistics Canada (2014). *2013 Labour Force Survey – Custom Tabulation.*

[127] Statistics Canada (2014). *2013 Labour Force Survey – Custom Tabulation.*

[128] Alberta Jobs, Skills, Training and Labour (2014). *Alberta Labour Force Profiles: Youth 2013.* http://work.alberta.ca/documents/labour-profile-youth.pdf

[129] Statistics Canada (2014). *2013 Labour Force Survey – Custom Tabulation.*

[130] Alberta Jobs, Skills, Training and Labour (2014). *Alberta Labour Force Profiles: Immigrants in the Labour Force 2013.* http://work.alberta.ca/documents/labour-profile-immigrants.pdf

[131] Alberta Jobs, Skills, Training and Labour (2014). *Alberta Labour Force Profiles: Immigrants in the Labour Force 2013.* http://work.alberta.ca/documents/labour-profile-immigrants.pdf

[132] Statistics Canada (2014). *2013 Labour Force Survey – Custom Tabulation.*

[133] Alberta Treasury Board and Finance (2014). Population Projection Alberta 2014–2041 – Highlights. http://www.finance.alberta.ca/aboutalberta/population-projections/2014-2041-Alberta-Population-Projections-Highlights.pdf

[134] Alberta Jobs, Skills, Training and Labour (2014). *Alberta's Occupational Demand and Supply Outlook 2013 - 2023* http://work.alberta.ca/documents/occupational-demand-and-supply-outlook-2013-2023.pdf

[135] Alberta Innovation and Advanced Education (2013). *Learner and Enrolment Reporting System (LERS).*

[136] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[137] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[138] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[139] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[140] Government of Alberta (2011). *Post-secondary Learning Act.* http://www.qaqc.gov.ab.ca/media/1050/Post-secondary_Learning_Act_2003.pdf.

[141] Government of Alberta (2010–11). *Sponsored Research Revenue: Research Funding at Alberta's Comprehensive Academic and Research Institutions.* (Currently Under Development).

[142] Alberta Innovation and Advanced Education (2014). Bibliometric Analysis of Alberta's Research Base by Science-Metrix Inc.

[143] Alberta Innovation and Advanced Education (2014). Bibliometric Analysis of Alberta's Research Base by Science-Metrix Inc.

[144] Alberta Innovation and Advanced Education (2014). Bibliometric Analysis of Alberta's Research Base by Science-Metrix Inc.

[145] Alberta Innovation and Advanced Education (2014). Bibliometric Analysis of Alberta's Research Base by Science-Metrix Inc.

[146] Statistics Canada (2012). *Gross domestic product, expenditure-based, by province and territory.* http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/econ15-eng.htm

[147] Statistics Canada (2012). *Estimates of population, Canada, provinces and territories (CANSIM table 051-0005).* http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0510005&paSer=&pattern=&stByVal=1&p1=1&p2=31&tabMode=dataTable&csid

[148] Roslyn Kunin and Associates (Revised 2012). *Economic Impact of International Education in Canada.* http://www.international.gc.ca/education/assets/pdfs/economic_impact_en.pdf

[149] Alberta Innovation and Advanced Education (2012). Alberta Graduate Outcomes Survey Class of 2009–10, Custom Tabulation.

[150] OECD (2013), *Education at a Glance 2013: OECD Indicators*, OECD Publishing. http://www.oecd.org/edu/eag2013%20(eng)--FINAL%2020%20June%202013.pdf

[151] OECD (2013), Education at a Glance 2013: OECD Indicators, OECD Publishing. http://www.oecd.org/edu/eag2013%20(eng)--FINAL%2020%20June%202013.pdf

[152] OECD (2013), *Education at a Glance 2013: OECD Indicators*, OECD Publishing. http://www.oecd.org/edu/eag2013%20(eng)--FINAL%2020%20June%202013.pdf

[153] The Canadian Bureau for International Education (2013). *A World of Learning: Canada's Performance and Potential in International Education* http://net.cbie.ca/download/CBIE_A%20World%20of%20Learning_English_web%20high%20res.pdf

[154] Citizenship and Immigration Canada (2013). Facts and Figures 2013: Immigration Overview–Permanent and Temporary Residents (CD-ROM).

[155] Citizenship and Immigration Canada (2013). *Facts and Figures 2013: Immigration Overview–Permanent and Temporary Residents (CD-ROM).*

[156] United Nations Economic, Scientific, and Cultural Organization (UNESCO) Institute for Statistics (2012). *Global Education Digest 2012*. Montreal: UNESCO-UIS. http://www.reading.org/Libraries/international/unesco-global-education-digest-2012.pdf

[157] Leger Marketing (2012). Alberta Graduate Outcomes Survey Class of 2009-2010: Publicly Funded Institution Graduates: Final Report. http://eae.alberta.ca/media/349290/gradoutcomes_2012.pdf

[158] Alberta Treasury Board and Finance (2014). *Alberta Population Projections, by Census Division, 2014–2041*. http://www.finance.alberta.ca/aboutalberta/population-projections/index.html